

LIBRARY.



Class..... N 353.9

Number..... a 102

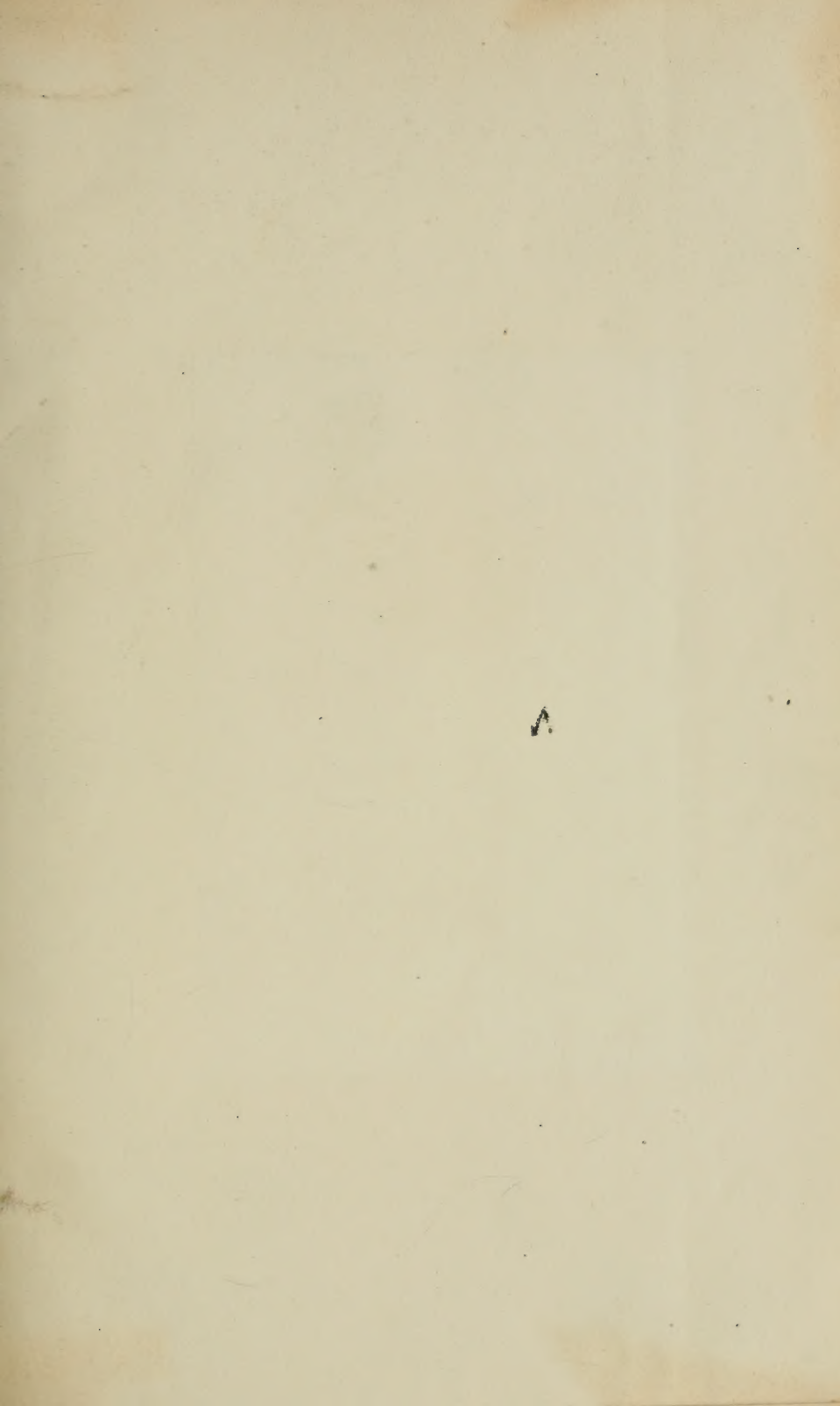
Volume..... II

Source..... N. H.

Received..... Oct., 1903

Cost.....

Accession No..... 9705



STATE OF NEW HAMPSHIRE

REPORTS 1901-1902

VOLUME II.—BIENNIAL

CONCORD, N. H.:

1902.

NH

353.9

N5325

1901/02

v.2

RUMFORD PRINTING CO., BINDERS,
CONCORD, N. H.

CONTENTS.

	PAGES.
REPORT OF SECRETARY OF STATE	24
REPORT OF ATTORNEY-GENERAL	12
REPORT OF BOARD OF EQUALIZATION	116
REPORT OF SUPERINTENDENT OF PUBLIC INSTRUCTION .	391
REPORT OF BOARD OF HEALTH	238
REPORT OF STATE HOSPITAL	176
REPORT OF FORESTRY COMMISSION	109
REPORT OF BOARD OF CHARITIES AND CORRECTION .	187
REPORT OF SCHOOL FOR FEEBLE-MINDED CHILDREN .	12
REPORT OF INDUSTRIAL SCHOOL	52
REPORT OF FISH AND GAME COMMISSION	44

ELEVENTH ANNUAL REPORT
OF THE
SECRETARY OF STATE

CONTAINING AN
ABSTRACT OF THE ANNUAL RETURNS
OF CORPORATIONS

DECEMBER 1, 1902.

CONCORD, NEW HAMPSHIRE.
1902.

J. PHANEUF & SON, PRINTERS, CONCORD, N. H.
RUMFORD PRINTING CO., BINDERS, CONCORD, N. H.

These returns are made in accordance with the provisions of Section 16, Chapter 150, of the Public Statutes:

SECTION 16. Every such corporation, except insurance companies, railroad corporations, banks, and loan and building associations, shall annually, in the month of May, make a return in writing, signed by and under oath of its treasurer and a majority of its directors, to the secretary of state and to the clerk of the town in which its principal business is carried on, if in this state, of the amount of all assessments voted by the corporation and actually paid in, the amount of all debts due to and from the corporation, and the value of all the property and assets of the corporation, so far as the same can be ascertained as existing on the first day of May; and if any such corporation shall fail so to do, the treasurer and directors shall be individually liable for all the debts and contracts of the corporation then existing, or which shall be contracted, until the return is made.

STATE OF NEW HAMPSHIRE.

OFFICE OF SECRETARY OF STATE,

CONCORD, December 1, 1902.

To the Honorable Senate and House of Representatives:

In obedience to Section 18, Chapter 150, of the Public Statutes, I have prepared the following abstract of the annual returns of corporations as existing May 1, 1902.

EDWARD N. PEARSON,

Secretary of State.

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
A. B. Skinner Co.....	A. W. Pressler.....	Keene.	April 13, 1897	\$33,000	\$33,000	\$100	\$9,707.74	\$4,004.64	\$53,650.27
Abbot Downing Co.....	Gerald Wyman.....	394 Atlantic Ave., Boston, Mass.	Dec. 2, 1872	400,000	400,000	100	In	hands of	assignee.
Alder Brook Lumber Co.....	Henry K. Hyde.....	Ware, Mass.	Mar. 25, 1897	20,000	20,000	100	\$6,777.35	\$32,562.91	\$50,413.61
Alexander Sanitarium.....	Geo. A. Webber.....	543 Boylston St., Boston, Mass.	Aug. 20, 1897	30,000	30,000	100			30,000.00
Alpine Aqueduct Co.....	Thos. E. Fisk.....	Gorham.	Act of 1874	25,000	24,000	100	500.00		15,000.00
Alton Shoe Co.....	Chas. H. McDuffee.....	Alton.	Jan. 30, 1902	20,000	19,400	50	3,219.17	2,354.87	18,694.09
American Automobile Wheel Co.....	H. L. Stillman.....	Concord Junction, Mass.	Oct. 11, 1901	1,000,000	1,000,000	25			Patents
American Investment Co.....	John C. Bullard.....	Boston, Mass.	June 22, 1885	100,000	100,000	50		26,067.29	35,500.00
American Shearer Mfg. Co.....	F. K. Priest.....	Nashua.	Mar. 22, 1875	20,000	20,000	100	15,231.75	20,431.48	142,120.99
Amory Mfg. Co.....	F. C. Dumaine.....	Box 1341, Boston, Mass.	July 1, 1879	2,000,000	900,000	100	480,647.75	30,000.00	1,399,500.00
Amoskeag Clothing Co.....	Aaron H. Weinstein.....	1045 Elm St., Manchester.	June 30, 1898	9,000	9,000	100	2,500.00	4,500.00	14,200.00
Annis Flour & Grain Co.....	Roswell Annis.....	Manchester.	Aug. 11, 1892	20,000	20,000	100	264.37	28,113.13	100,000.00
Annis Grain & Lumber Co.....	" "	North Londonderry	Aug. 30, 1892	40,000	40,000	100	4,000.00	16,000.00	97,000.00

REPORT OF THE SECRETARY OF STATE.

7

Company	Agent	Date	Value	Quantity	Price	Value	Value
Aslund Knitting Co.....	Geo. E. Scribner.....	Mar. 1, 1886	100,000	100	6,504.01	64,086.08	180,903.68
Associates Land Co.....	Chas. E. Trafton.....	May 10, 1901	5,000	25	.....	.....	5,000.00
Asquam Transportation Co.....	Geo. E. Hubbard.....	Oct. 17, 1901	6,000	100	.....	.....	6,000.00
A Z Jenkins Co.....	A. Z. Jenkins.....	Nov. 15, 1900	6,000	100	250.00	1,980.00	Destroyed by fire 4,000.00
Baker's River Creamery Co.....	B. A. Hall.....	April 12, 1892	4,000	100	.....	.....	.....
Ball and Socket Fastener Co.....	W. S. Richardson.....	Jan. 18, 1894	100,000	50	.....	.....	101,338.44
Barron Hotel Co.....	W. A. Barron.....	Nov. 20, 1895	115,000	100	239.60	85,374.50	206,767.81
Barron, Merrill & Barron Co.....	W. A. Barron.....	April 20, 1899	20,000	100	10,874.51	11,000.00	41,102.16
Bath Lumber Co.....	A. N. Blandin.....	June 10, 1891	75,000	100	26,568.72	36,174.70	70,000.00
Beecher Falls Co.....	H. H. Dudley.....	Nov. 3, 1894	175,000	100	33,145.78	89,383.03	192,642.26
Belknap Co. & Laconia Grange Fair Association.....	C. W. Tyler.....	May 8, 1901	1,000	25	.....	375.00	400.00
Bell Factory Co.....	E. H. Taylor.....	Sept. 13, 1893	10,900	25	.....	.....	5,105.50
Berlin Dry Goods Co.....	Lorin A. Dresser.....	Dec. 21, 1895	21,000	100	6,856.07	15,200.00	34,175.35
Bethlehem Park Asso.....	Benjamin Tucker.....	May 27, 1898	15,000	25	.....	400.00	15,000.00
Blue Bank Gold Mining Co.....	Louis P. Howe.....	Mar. 10, 1881	500,000	20	3,754.01	.....	Mine and 3,754.01
Blue Mountain Forest Asso.....	Geo. S. Edgell.....	Aug. 31, 1891	6,000	100	1,106.32	21,949.90	Nominal
Board of Trade Building Co.....	Isaac A. Hill.....	Jan. 15, 1889	50,000	100	.....	.....	50,000.00
Boston District Messenger Co.....	H. A. Hunt.....	Nov. 21, 1888	91,000	50	420.82	.....	91,000.00
Boston Fruit Co.....	F. Caci.....	Jan. 11, 1901	20,000	100	5,569.77	2,867.16	22,868.11
Bradford Telephone Mfg. Co.....	Oliver Gildersleeve.....	Nov. 10, 1897	5,000	50	.....	.....	967.91
Bristol Aqueduct Co.....	M. W. White.....	April 3, 1886	22,000	50	205.50	435.00	22,000.00

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.—Continued.

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
Bristol Electric Light Co.....	D. M. Calley.....	Bristol.	Nov. 4, 1889	\$16,000	\$16,000	\$50	\$523.47	\$9,316.23	\$18,000.00
Bristol Water Power Co.....	Frank P. Fields.....	Bristol.	Aug. 9, 1884	15,000	15,000	50	262.33	70.00	15,000.00
Brookline Improvement Co.....	Clarence R. Russell.....	Brookline.	Mar. 2, 1896	3,000	1,550	25	.....	.....	39.25
Browns Lumber Co.....	James C. Trickey.....	Whitefield.	July 1, 1874	346,800	346,800	100	71,500.47	47,555.88	633,871.29
Bullard & Shedd Co.....	Chas. G. Shedd.....	Keene.	Oct. 11, 1899	15,000	45,000	100	7,526.18	12,167.02	32,526.18
Burbank Mfg. Co.....	L. F. Burbank.....	Nashua.	July 19, 1901	3,000	3,000	100	1,101.96	1,424.09	3,335.12
Busell Lasting Machine Co.....	Wm. D. Orcutt.....	197 Lincoln St., Boston, Mass.	Nov. 27, 1896	200,000	200,000	10	794.30	3,615.16	204,245.31
Canada American Co.....	Hector Morin.....	Franklin Falls.	May 13, 1901	4,000	3,350	100	30.00	4,000.00	8,200.00
Casino Building Co.....	E. P. Thompson.....	Laconia.	Oct. 30, 1898	9,375	9,375	25	.....	8,350.00	17,867.06
C. E. Brewster Co.....	E. S. Shortridge.....	Dover.	Feb. 8, 1900	20,000	20,000	100	14,882.84	20,056.08	30,000.00
C. F. Willey Co.....	Silas G. Clifford.....	Biddeford, Me.	Jan. 22, 1902	20,000	20,000	100	416.97	840.39	20,423.42
C. H. Burke Baking Co.....	Chas. H. Burke.....	Nashua.	Feb. 4, 1896	15,000	15,000	100	6,175.00	8,200.00	34,770.00
Cherokee Turkey Red Dye Works	Justin Edwards.....	Box 1665, Boston, Mass.	Sept. 5, 1900	100,000	69,575	25	20,000.00	18,000.00	71,000.00
Cherry Mt. Grange No. 201, Asso	Duncan McMillan.....	Twin Mountain.	Sept. 12, 1900	5,000	55	5	.....	200.00	700.00

China Mfg. Co.....	B. R. Weld.....	Boston, Mass.	June 11, 1867	1,000,000	800,000	100	11,319.56	43,922.00	240,000.00
Citizens Ice Co.....	Arthur T. Cass.....	Tilton.	Oct. 27, 1898	1,800	1,800	25	.....	1,000.00	3,000.00
Citizens Telephone Co.....	Stephen B. Cole.....	Lakeport.	July 23, 1896	45,000	45,000	25	800.00	1,000.00	25,000.00
City Supply Co.....	A. H. Eastman.....	Berlin.	Oct. 1, 1901	5,000	5,000	100	3,200.00	2,189.77	4,076.57
Combination Nail Machine Co.....	Wm. E. Blunt.....	Haverhill, Mass.	Jan. 5, 1889	1,000,000	1,000,000	10	.....	.....	Patents
Concord Axle Co.....	D. Arthur Brown.....	Penacook.	May 18, 1880	* 75,000	75,000	100	17,037.73	20,169.69	100,000.00
Concord Cattle Co.....	Benj. W. Couch.....	Concord.	Feb. 16, 1883	250,000	250,000	500	.....	16,000.00	125,000.00
Concord Development Co.....	Josiah E. Fernald.....	Concord.	July 1, 1890	15,300	15,300	100	.....	.....	15,730.23
Concord Electric Co.....	W. H. Whitney.....	68 Ames Bldg., Boston, Mass.	May 29, 1901	400,000	400,000	100	13,406.30	288,978.58	681,216.65
Concord Land & Water Power Co.....	C. C. Danforth.....	Concord.	Property Act of 1874	conveyed 150,000	to Con 150,000	cord 100	Electric 14,052.03	Co., July 227,910.90	1, 1901. 336,640.59
Concord Manufacturing Co.....	Paul R. Holden.....	Penacook.	Dec. 26, 1896	30,000	30,000	100	.....	.....	30,000.00
Concord Real Estate Co.....	Frank M. Knowles.....	Concord.	.....	.....	.....	.....	.....	.....	Shoe Factory
Concord Shoe Factory.....	W. F. Thayer.....	Concord.	June 16, 1884	27,500	27,500	100	200.00	700.00	.....
Contoocook Mills.....	Geo. E. Gould.....	Hillsboro Bridge.	Dec. 20, 1881	150,000	150,000	100	.....	85,000.00	305,000.00
Cooks Lumber Co.....	C. M. Avery.....	Concord.	May 1, 1901	66,000	66,000	100	11,500.00	2,847.41	71,307.23
Coos Lodge Corporation.....	Geo. N. Kent.....	Lancaster.	May 4, 1895	10,000	10,000	25	641.39	15,263.06	22,757.16
Cornish Creamery Co.....	E. B. Hunt.....	Cornish Flat.	June 9, 1888	5,000	5,000	10	1,819.06	2,043.06	5,274.70
Courier Publishing Co.....	Nath'l T. Kimball.....	Rochester.	Oct. 22, 1894	6,000	6,000	100	2,328.37	.....	10,000.00
C. R. Pease House Furnishing Co.....	L. B. Pease.....	Nashua.	Mar. 31, 1898	45,000	45,000	100	17,023.05	28,014.31	81,403.16
Crystal Lake Water Co.....	Albert E. Barney.....	Canaan.	Aug. 16, 1889	20,000	12,000	10	.....	.....	12,000.00
Dalton Power Co.....	H. E. Fitzgerald.....	Fitzdale, Vt.	Mar. 16, 1897	150,000	150,000	100	7,694.20	120,235.92	275,000.09

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.—Continued.

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
Daniels Granite Co.....	Chas. B. Dodge.....	Milford.	Aug. 3, 1899	\$10,000	\$10,000	\$100	\$3,810.96	\$4,500.00	\$12,736.62
Derryfield Co.....	Perry H. Dow.....	Manchester.	Nov. 8, 1901	50,000	50,000	100	17,505.77	6,070.20	Real Estate, etc.
D K Mfg. Co.....	C. A. Siegmund.....	Boston, Mass.	Oct. 13, 1892	30,000	30,000	100	15.75		Patents, etc.
Dodge Museum.....	Mary D. Aiken.....	Hampton Falls.	July 19, 1900	Curiosities and	Curiosities and	Antiques.			
Dodge Needle Co.....	A. B. Dodge.....	Manchester.	Feb. 5, 1895	12,000	12,000	100	1,757.79	5,186.18	24,893.03
Dover Beef Co.....	S. E. Hyde.....	Boston, Mass.	Aug. 11, 1887	20,000	20,000	50	24,661.21	18,827.28	24,215.46
Dover Gas Light Co.....	J. Frank Lang.....	Portland, Maine.	Act of 1850	100,000	100,000	25			109,947.66
Drake & Sanborn Shoe Co.....	Nath'l S. Drake.....	Pittsfield.	Dec. 28, 1892	10,000	10,000	50	1,842.05	8,024.39	3,881.35
Draper & Maynard Co.....	Harry S. Huckins.....	Ashland.	Nov. 27, 1897	* 50,000	50,000	100	43,681.74	42,941.08	75,477.10
Dublin Lake Club.....	Ernest F. Henderson.	Dublin.	Sept 28, 1901	7,000	7,000	100		8,225.00	10,400.00
Dustin Island Woolen Mills.....	A. G. Harris.....	Penacook.	Nov. 14, 1894	40,000	40,000	100	153,306.90	72,489.47	83,817.43
Eastern Chemical Co.....	Geo. W. Coggeshall...	620 Atlantic Ave., Boston, Mass.	Aug. 4, 1899	25,000	25,000	100	100.33	120.06	29,982.81
Eaton Heights Shoe Co.....	W. P. Farmer.....	Manchester.	May 17, 1894	20,000	20,000	50		11,400.00	22,000.00

East Haverhill Creamery Co.....	W. B. Pike.....	Pike Station.	Mar. 20, 1890	3,000	25	2,851.93	4,675.05	5,059.17
Elliott Mfg. Co.....	Wm. N. Johnson.....	Manchester.	April 5, 1892	150,000	100	1,941.15	93,075.24	360,849.87
Elm Mills Woollen Co.....	E. G. Morrison.....	Tilton.	May 16, 1895	20,000	100	1,660.00	18,343.63	55,059.00
Esty Hosiery Co.....	F. A. Phelps.....	Laconia.	May 17, 1894	100,000	100	.....	.....	.....
Esty Sprinkler Co.....	F. A. Phelps.....	Laconia.	Mar. 15, 1893	100,000	100	5,111.50	277.11	110,000.00
Etna Mining Co.....	J. F. Hammerstrom.....	Butler.	April 3, 1901	150,000	25	.....	214.00	75,220.04
Everett Knitting Works.....	Geo. S. Rogers.....	Lebanon.	Feb. 4, 1887	150,000	100	9,719.51	58,308.41	189,753.39
Exeter Brass Works.....	Eben Folsom.....	Exeter.	Dec. 31, 1892	15,000	50	16,691.64	1,840.96	17,000.00
Exeter Building Asso.....	Stephen H. Gale.....	Exeter.	Sept. 5, 1884	27,600	100	2,178.00	32,430.00	Plant
Exeter Machine Works.....	W. Burlingame.....	Exeter.	Nov. 15, 1870	60,000	66%	6,031.02	15,336.58	61,847.89
Exeter Mfg. Co.....	Geo. E. Kent.....	Exeter.	Jan. 22, 1838	500,000	50	7,011.50	169,000.00	490,191.84
Exeter Telephone Co.....	Geo. B. Shaw.....	Exeter.	June 27, 1898	5,000	25	43.27	467.60	4,100.00
Farmington Improvement Asso.....	Sam'l S. Parker.....	Farmington.	Jan. 27, 1900	2,000	25	49.25	.....	3,500.00
Fenno W. Fifield Co.....	Fred L. Shapleigh.....	Rochester.	Feb. 19, 1900	4,000	100	550.12	.....	4,500.00
Fitzwilliam Hotel Co.....	John S. Blair.....	Fitzwilliam.	Mar. 8, 1900	10,000	100	1,387.36	6,083.56	14,000.00
Fiather & Co. (Inc.).....	Joseph Fiather.....	Nashua.	Nov. 27, 1901	100,000	100	43,000.32	18,697.80	182,298.17
Fiather Foundry Co.....	Joseph Fiather.....	Nashua.	Nov. 16, 1892	15,000	100	15,305.56	2,661.89	32,292.54
Fletcher & Webster Furniture Co.....	J. M. Fletcher.....	Nashua.	Feb. 1, 1878	40,000	100	4,140.93	5,501.43	41,420.93
Franklin Mfg. Co.....	Benton T. Clough.....	Franklin.	Nov. 26, 1901	6,000	100	1,011.41	1,292.65	7,828.77
Gale Bros. (Inc.).....	Stephen H. Gale.....	Exeter.	Jan. 31, 1894	205,000	100	94,026.36	155,917.58	260,891.22
Gerrish Co.....	W. H. Gerrish.....	Berlin.	Dec. 1, 1900	17,000	100	6,079.97	3,910.65	15,580.48
Gilford Village Cemetery Asso.....	Chas. H. Gove.....	Gilford.	Mar. 19, 1901	.....	.....	.....	455.00	1,000.00

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.—Continued.

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
Gilmanston Creamery Co.....	R. A. Knowles.....	Gilmanston.	Aug. 27, 1895	\$2,000	\$ 3,000	\$25	\$1,367.75	\$2,648.90	\$5,500.00
Gilmanston Iron Works Bldg. Corporation.....	Chas. H. Dockham.....	Gilmanston I. W. Box 3159 Boston, Mass.	April 4, 1900	2,500	400	25	.....	200.00	385.61
Gilmanston Mills.....	F. I. Eustis.....	Berlin.	Aug. 27, 1875	100,000	100,000	100	59,044.80	2,846.31	103,131.08
Glen Land & Building Co.....	G. P. Bickford.....	Rochester.	May 14, 1901	15,000	15,000	100	.....	400.00	20,000.00
Grange Block Co.....	Dudley B. Waldron.....	Lisbon.	Dec. 12, 1888	12,000	12,000	100	.....	.....	12,000.00
Granite State Electrical Works	N. G. English.....	(90 State St., Boston, Mass.	July 19, 1900	25,000	25,000	100	3,631.64	16,087.25	31,542.54
Granite State Land Co.....	Henry A. Tenney.....	Woolboro.	Dec. 5, 1900	250,000	250,000	100	.....	250,000.00	500,000.00
Granite State News Pub. Co	Sewall W. Abbott.....	Boston, Mass.	Dec. 31, 1899	4,000	4,000	50	1,238.94	287.75	4,375.00
Granular Metal Co.....	Wm. F. Davis.....	Boston, Mass.	April 8, 1880	150,000	130,000	10	4,971.59	6,349.30	31,392.88
Hampson Flexible Steam Joint Co.....	M. L. Crane.....	Lakeport.	Jan. 24, 1895	35,000	35,000	100	98.58	250.00	31,070.75
Hanover Country Club.....	Henry J. Weston.....	Hanover.	June 17, 1899	1,500	1,500	100	.....	1,700.00	3,500.00
Head & Dowst Co.....	John Dowst.....	Manchester.	Mar. 19, 1891	500,000	100,000	100	153,986.92	198,389.00	422,670.53
Highland Spring Sanitarium	A. E. Brownrigg.....	Nashua.	May 8, 1900	40,000	40,000	100	500.00	28,000.00	50,000.00

Hillsboro Electric L. & P. Co.....	J. F. Grimes.....	Hillsboro Bridge.	Feb. 19, 1895	35,000	50	\$386.81	\$7,500.00	\$35,000.00
Hillsboro Mills.....	Nash Simons.....	Wilton.	June 27, 1873	500,000	100	880.00	12,318.14	81,438.14
Holbrook Grocery Co.....	W. F. Holbrook.....	Keene.	Nov. 27, 1894	40,000	100	50,000.00	25,000.00	75,000.00
Home Investment Co.....	Frank M. Knowles.....	Concord.	Mar. 29, 1898	25,500	100	.....	.....	25,500.00
Hooksett Mfg. Co.....	Frank E. Cox.....	Hooksett.	Sept. 2, 1892	200,000	100	Sold Aug. 30, 1901.	No	liabilities
H. P. Hood & Sons.....	Chas. H. Hood.....	Charlestown, Mass.	Jan. 1, 1890	40,000	100	133,858.11	180,817.27	180,954.69
Ideal Mfg. Co.....	A. B. Davis.....	Tilton.	Jan. 4, 1893	30,000	100	18,121.54	16,480.69	47,602.27
Jackson Co.....	Frederic Amory.....	P. O. Box 1302 Boston, Mass.	July 1, 1830	600,000	1000	314,158.80	590,000.00	702,650.00
James W. Foster Co.....	James W. Foster.....	Bath.	May 29, 1896	25,000	100	2,875.36	2,741.34	16,137.20
James W. Hill Co.....	James W. Hill.....	Manchester.	Aug. 21, 1891	40,000	100	900.01	16,929.08	97,723.62
J. A. Wright & Co.....	A. L. Wright.....	Keene.	Dec. 11, 1893	30,000	100	5,586.37	721.68	32,941.42
J. B. Millet Co.....	A. L. Hall.....	Newtonville, Mass.	April 10, 1891	25,000	100	52,629.17	102,072.74	116,219.01
J. C. Derby Co.....	H. B. Roby.....	Concord.	May 25, 1899	20,000	100	450.00	2,100.00	27,785.38
J. H. DeCourcey Co.....	J. H. DeCourcey.....	Manchester.	Nov. 8, 1897	2,000	50	8,325.14	7,619.99	5,979.02
John Gould Co.....	D. H. Kelly.....	West Lebanon.	Aug. 1, 1898	6,000	100	4,375.27	3,728.15	4,200.00
J. Y. McQueston Co.....	E. A. McQueston.....	Manchester.	Jan. 7, 1892	12,000	100	7,897.95	8,902.64	18,027.78
Kaawali Coffee Co.....	Robt. W. Armstrong.....	Winchester, Mass.	May 10, 1898	30,000	25	20.64	333.57	5,330.94
Kearsarge Hotel Co.....	C. H. Shedd.....	No. Conway.	June 2, 1889	30,000	100	.....	.....	35,000.00
Kennedy Land Co.....	Chas. C. Hayes.....	Manchester.	Dec. 12, 1892	25,000	50	800.00	9,003.00	39,000.00
Kimball Carriage Co.....	Dani. S. Kimball.....	Manchester.	April 1, 1890	75,000	100	57,961.66	56,913.45	158,224.55
Kingston Lumber Co.....	F. W. Pettibone.....	Quilman, Miss.	Sept. 8, 1900	450,000	100	69,377.67	482,695.01	705,898.74
Kingston Masonic Bldg Asso.....	E. G. Flanders.....	Brentwood.	Jan. 23, 1893	4,000	50	100.00	.....	4,000.00

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
Kirby Floral Co.....	Wm. N. Johnson.....	Manchester,	June 1, 1891	\$2,000	\$1,412.50	\$50	\$926.72	\$2,027.40	\$3,608.79
Kusumpe Lumber Co.....	E. A. Stowell.....	Ashland,	Nov. 15, 1897	10,000	10,000	25	5,623.03	8,661.62	16,742.70
Laconia Car Co. Works.....	P. W. Whittemore.....	50 State Street, Boston, Mass.	Feb. 27, 1897	500,000	500,000	100	129,054.59	93,079.38	692,745.48
Laconia Electric Lighting Co.....	C. W. Tyler.....	Laconia,	Dec. 28, 1884	45,000	45,000	50	1,247.00	12,100.00	62,351.00
Laconia Garment Co.....	Geo. P. Munsey.....	"	Aug. 2, 1901	5,000	5,000	100	2,525.85	1,409.76	3,992.81
Laconia Land & Improvement Co.....	John W. Ashman.....	"	June 28, 1890	10,000	10,000	100	.....	6,832.00	16,903.84
Laconia Lumber Works.....	Geo. W. Riley.....	"	Mar. 25, 1890	30,000	30,000	100	2,421.00	16,072.00	44,126.00
Laconia Press Asso.....	A. W. Dinsmore.....	"	Jan. 3, 1898	12,600	12,600	100	5,000.00	2,100.00	17,600.00
Laconia Water Co.....	Edmund Little.....	"	Sept. 7, 1883	100,000	100,000	50	2,287.00	72,908.00	170,000.00
Lake Land Co.....	J. M. Fletcher.....	Nashua,	June 8, 1893	5,000	5,000	100	105.00	.....	5,000.00
Lebanon Electric L. & P. Co.....	Henry M. Day.....	Lebanon,	June 19, 1890	18,000	18,000	50	1,448.75	354.03	21,771.79
Leighton Machine Co.....	A. B. Dodge.....	Manchester,	Mar. 20, 1894	50,000	50,000	100	13,721.65	621.38	74,106.94
Lisbon Creamery Co.....	L. F. Ash.....	Lisbon,	May 12, 1893	3,500	3,300	25	.....	.....	3,800.00
Littleton Driving Park Asso.....	J. A. Moore.....	Littleton,	May 16, 1887	4,600	4,600	10	.....	50.00	1,500.00

Littleton Shoe Co.....	W. H. Nute.....	Littleton.	Aug. 27, 1895	70,200	100	19,148.18	37,693.71	104,387.66
Littleton Water & Light Co.....	Hunter Wykes.....	44 Wall St., N. Y. city.	Jan. 23, 1896	80,000	100	.....	150,000.00	150,000.00
Locke Cattle Co.	W. C. Berry.....	Manchester.	Feb. 23, 1884	25,000	85	1,861.80	.....	4,157.71
Lovell Creamery Co.....	Geo. N. Gage.....	East Washington.	Mar. 20, 1886	1,800	25	56.32	.....	102.40
Manchester Coal and Ice Co.....	John R. Willis.....	Manchester.	July 1, 1895	25,000	100	15,533.80	25,772.30	51,147.41
Manchester Garment Co.....	J. Brodie Smith.....	"	Nov. 19, 1897	19,500	50	530.54	10,056.79	14,068.80
Manchester Heating and Light- ing Co.....	Edmund F. Higgins.....	"	Feb. 28, 1890	25,000	100	10,961.93	18,185.32	44,458.90
Manchester Mills.....	Charles W. Jones.....	Boston, Mass.	July 3, 1873	2,500,000	100	1,358,320.91	2,956,000.00	5,762,740.26
Manchester News Publishing Co.....	H. N. Davison.....	Manchester.	Jan. 16, 1901	25,000	100	4,403.94	14,917.58	38,125.00
Manchester Opera House Co.....	E. W. Harrington.....	"	Feb. 26, 1880	40,000	100	.....	.....	40,000.00
Manchester Sanitarium Co.....	M. Ivan Dow.....	"	April 13, 1901	5,000	50	1,500.00	.....	4,000.00
Manchester Shoe Mfg. Co.....	W. O. McAllister.....	"	July 7, 1885	40,000	50	.....	4,000.00	42,882.40
Manchester Stocking Co.....	Harry P. Ray.....	"	Jan. 10, 1902	20,000	100	850.00	7,150.00	25,255.64
Manchester Traction, L. & P. Co.....	S. Reed Anthony.....	53 State St., Boston, Mass.	Feb. 13, 1901	1,650,000	100	69,321.66	1,379,696.98	3,154,619.38
Marine Safety Rapid Transit Co.....	Wm. E. Blunt.....	Haverhill, Mass.	June 24, 1885	250,000	10	.....	.....	Patents
Marlboro Electric Light Co.....	G. G. Davis.....	Marlboro.	June 5, 1899	15,000	50	164.03	4,703.74	16,024.22
Masonic Association.....	Clarence D. Fay.....	Hinsdale.	Feb. 15, 1880	.....	.....	.....	.....	2,192.39
Masonic Temple Association.....	Wm. F. Knight.....	Laconia.	Dec. 5, 1894	40,000	50	394.18	35,130.42	75,000.00
Meredith Electric Light Co.....	E. C. Mansfield.....	Meredith.	Nov. 9, 1893	10,000	100	600.00	600.00	Plant
Meredith S. & L. Co.....	B. R. Dearborn.....	"	Feb. 6, 1885	10,000	100	6,407.46	92,619.18	84,016.63
Mica Crystal Co.....	Josiah E. Fernald.....	Concord.	July 2, 1900	10,000	100	2,100.13	718.57	12,032.80

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.—*Continued.*

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
Milford Granite Co.....	H. H. Barber.....	Milford	May 23, 1894	\$33,000	\$33,000	\$100	\$19,171.37	\$25,326.93	\$48,705.78
Milford Tanning Co.....	Albert J. Foster.....	182 Lincoln St., Boston, Mass.	Oct. 9, 1880	35,000	35,000	100	.....	47,111.88	41,453.09
Milton Shoe Co.....	John Jenkins.....	Milton.	Jan. 17, 1901	5,000	5,000	50	.....	2,551.60	7,485.63
Mineral Land Co.....	Avery B. Dodge.....	Manchester.	July 18, 1901	30,000	30,000	100	10,000.00	.....	30,000.00
Monitor & Statesman Co.....	Wm. D. Chandler.....	Concord.	July 16, 1898	25,000	25,000	100	30,338.00	25,054.00	60,018.00
Mont Calm Grange, No. 70, P. of H.	S. N. H. Andrews.....	Enfield.	Aug. 2, 1900	.....	.....	.....	.....	625.00	1,600.00
Morrison Shoe Co.....	Frank E. Shepard.....	Concord.	July 28, 1900	20,000	20,000	100	25,078.00	40,400.00	43,344.00
Musical World Publishing Co.....	Lorin F. Deland.....	8 Beacon St., Boston, Mass.	Dec. 27, 1900	25,000	7,500	100	1,678.00	877.92	2,950.96
Nardini Co.....	R. Nardini.....	Concord.	Jan. 1, 1901	24,000	24,000	50	1,924.00	11,765.86	26,690.00
Nashua Armory Asso.....	Chas. H. Burke.....	Nashua.	June 17, 1880	15,000	15,000	50	.....	16,300.00	32,000.00
Nashua Building Co.....	Wm. D. Swart.....	"	Dec. 12, 1892	5,000	5,000	50	16,939.73	19,929.63	11,751.42
Nashua Card & Glazed Paper Co	(G. W. Currier.....	"	July 6, 1866	500,000	75,000	100	63,734.15	161,331.38	208,089.90
Nashua Co-operative Iron Foundry Co.....	Thos. W. Keely.....	"	Jan. 27, 1881	22,000	22,000	100	11,882.06	1,167.77	28,790.33

Nashua Fair Association.....	J. E. Tolles.....	Nashua.....	Jan. 9, 1900	15,000	15,000	25	.....	6,200.00	22,385.63
Nashua Hardware Co.....	E. C. Barnard.....	"	Feb. 19, 1901	20,000	20,000	50	9,300.00	2,170.14	23,000.00
Nashua Iron & Brass Foundry Co.....	Lewis K. Morse.....	4 Liberty Square, Boston, Mass.	April 1, 1890	50,000	50,000	100	14,652.70	67,846.03	Real es- tate, etc
Nashua Mfg. Co.....	Frederic Amory.....	Box 1302, Boston, Mass.	June 17, 1823	1,000,000	1,000,000	500	1,326,502.55	1,696,615.50	1,412,300.00
Nashua Press Asso.....	Wm. O. Clough.....	Nashua.....	Sept. 7, 1896	3,500	3,500	50	1,968.76	541.34	14,000.00
National Asso. of Railway Postal Clerks.....	Geo. A. Wood.....	Portsmouth.....	Dec. 14, 1898	.....	.....	.....	.....	.....	42,000.00
National Emery Wheel Co.....	Geo. F. Reif.....	Waltham, Mass.	Nov. 21, 1900	75,000	75,000	25	1,866.28	3,256.43	77,699.50
New Hampshire Cattle Co.....	Josiah E. Fernald.....	Concord.....	Jan. 4, 1884	183,400	183,400	100	117.00	.....	31,554.13
New Hampshire Improvement Co.....	John F. Stark.....	Nashua.....	Aug. 18, 1890	100,000	100,000	100	785.00	19,440.45	129,627.05
New Hampshire Publishing Co.....	Geo. F. Willey.....	Manchester.....	Nov. 4, 1901	100,000	100,000	100	5,496.00	.....	105,496.00
New Hampshire Real Estate Co.....	Josiah E. Fernald.....	Concord.....	Nov. 27, 1895	50,000	50,000	25	6,156.00	.....	92,037.80
New Hampshire Spinning Mills.....	H. H. Dudley.....	"	Sept. 12, 1899	200,000	200,000	100	28,788.24	125,989.55	347,715.75
New Hampshire Traction Co.....	Henry A. Tenney.....	60 State Street, Boston, Mass.	Nov. 19, 1901	1,000,000	1,000,000	100	297,353.39	4,336,520.82	5,013,010.26
New England College of Lan- guages.....	Paul E. Kunzer.....	218 Boylston Street, Boston, Mass.	Aug. 1, 1899	20,000	20,000	25	632.00	952.25	22,450.00
New England Roller Grate Co.....	Wm. H. Baush.....	Springfield, Mass.	Jan. 3, 1889	30,000	16,000	10	2,970.74	7,252.70	40,782.44
Newmarket Mfg. Co.....	Linzee Prescott.....	87 Milk Street, Boston, Mass.	Act of 1823	800,000	800,000	500	134,086.36	555,393.65	1,273,920.41
New Mountain Spring Brewing Co.....	M. T. Dwyer.....	Clinton, Mass.	May 18, 1896	50,000	50,000	100	19,519.44	42,985.97	67,013.85
Nims, Whitney & Co.....	C. Willis Morse.....	Keene.....	Jan. 16, 1896	30,000	30,000	100	23,055.71	13,809.21	23,000.00
North Conway Telephone Co.....	J. Z. Shedd.....	North Conway.....	Aug. 27, 1900	5,000	3,525	25	.....	100.00	3,700.00

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.—Continued.

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
Northern Tel. & Telegraph Co.	Francis A. Houston	119 Milk Street, Boston, Mass.	April 28, 1892	\$10,000	\$4,000	\$100	\$3,914.92	\$34,122.05	\$53,346.16
North Park Cattle Co.	D. M. Anthony	46 Ames Bldg., Boston, Mass.	June 9, 1885	200,000	200,000	100	31,521.09	179,146.51	232,304.70
Nourse Hardware Co.	Wm. H. Nourse	Newport.	Aug. 2, 1897	7,000	7,000	50	5,300.00	2,900.00	10,800.00
New Oak Park Fair Asso.	Willis D. Hardy	Greenfield.	April 12, 1899	2,500	2,500	25	45.00	850.00	4,000.00
Occom Pond Asso.	Henry J. Weston	Hanover.	Dec. 9, 1901	900	375	15	8.79	50.15	375.00
Odd Fellows Building Asso.	F. W. Pulsifer	Lakeport.	Oct. 17, 1893	11,000	11,000	100	249.50	600.00	11,000.00
Odd Fellows Building Asso.	Charles S. Nesmith	Reeds Ferry.	April 18, 1900	2,000	1,425	25	.....	1,400.00	2,825.00
Page Belting Co.	Charles T. Page	Concord.	July 4, 1872	250,000	250,000	50	205,735.42	435,503.38	749,200.62
Parisian Mfg. Co.	D. Brooks Rubin	Lynn, Mass.	Dec. 11, 1901	10,000	8,100	25	.....	384.00	2,000.00
Pembroke Mills.	B. R. Weld	Boston, Mass.	July 11, 1855	500,000	300,000	100	25,312.00	.....	90,000.00
Pembroke Sanitarium Co.	Ernest Fontaine	Suncook.	Dec. 23, 1901	10,000	5,250	50	.....	.....	5,250.00
Penacook Electric Light Co.	A. G. Harris	Penacook.	July 3, 1891	30,000	30,000	100	2,170.70	7,331.13	50,019.45
Pennichuck Water Works.	Harry M. Hobson	Nashua.	Act of 1853	800,000	700,000	100	4,201.67	.....	702,819.22
Pentucket Variable Stitch Sewing Machine Co.	Harold F. Blake	Haverhill, Mass.	Aug. 30, 1883	150,000	150,000	50	.....	6,000.00	5,500.00

People & Patriot Co.....	G. L. Danforth.....	Concord.	Feb. 11, 1899	15,000	15,000	6,400.00	6,400.00	15,000.00
Perry Granite Co.....	Wm. F. Perry.....	Keene.	Sept. 1, 1900	2,500	2,500	1,423.39	19.25	2,360.72
Peterboro Creamery Co.....	Eben W. Jones.....	Peterboro.	April 13, 1883	2,000	2,000	1,226.13	2,532.75	2,541.48
Peterboro Improvement Co.....	James F. Brennan.....	"	June 28, 1884	20,750	20,433			5,000.00
Peterboro Shank Co.....	A. B. Sprague.....	"	July 7, 1897	50,000	50,000	2,608.94	14,818.59	79,922.84
Pike & Heald Co.....	Frank E. Heald.....	Manchester.	July 14, 1893	50,000	50,000	22,454.58	1,608.32	72,031.71
Pike Mfg. Co.....	E. Bertram Pike.....	Pike Station.	Jan. 19, 1889	70,000	70,000	96,487.78	44,094.98	266,379.00
Pike Station Store Co.....	E. Bertram Pike.....	"	Jan. 25, 1899	25,000	20,000	4,536.80	6,221.64	22,375.00
Pitman Mfg. Co.....	Joseph W. Pitman.....	Laconia.	July 1, 1875	200,000	54,000	9,118.55	63,777.47	211,103.73
Plymouth Creamery Co.....	John E. Smith.....	Plymouth.	May 20, 1893	5,500	5,500	3,119.07	2,614.30	9,757.07
Plymouth Electric Light Co.....	F. C. Calley.....	"	July 19, 1891	10,000	10,000	962.78	2,108.62	12,380.74
Plymouth Fair Association.....	R. E. Smythe.....	"	Feb. 3, 1897	1,050	1,050			1,050.00
Portsmouth Brewing Co.....	W. F. Harrington.....	Portsmouth.	Dec. 18, 1875	80,000	80,000	20,340.99	37,076.50	213,617.13
Portsmouth Country Club.....	Charles W. Brewster.....	"	July 20, 1901			650.00	487.00	Club House
Postal District Messenger Co.....	Gilbert C. Carpenter.....	Providence, R. I.	Aug. 12, 1891	30,000	30,000	300.00		30,000.00
Prescott Piano Co.....	Geo. D. B. Prescott.....	Concord.	Feb. 1, 1891	50,000	50,000	66,039.08	50,826.01	116,719.91
Profile & Flume Hotels Co.....	C. F. Eastman.....	Littleton.	May 11, 1898	150,000	150,000	5,014.95	385.22	158,464.48
Rand, Ball & King Co.....	Henry O. King.....	Claremont.	April 15, 1901	15,000	15,000	6,463.44	4,246.10	18,000.00
Record Co.....	H. L. Cate.....	Rochester.	Feb. 3, 1898	3,500	3,500	500.00		3,000.00
Rimmon Mfg. Co.....	Chas. C. Hayes.....	Manchester.	Jan. 19, 1893	15,000	15,000		15,027.00	33,000.00
Rivertdale Park Asso.....	Frank A. Smith.....	Lebanon.	Sept. 4, 1897	3,500	3,500		1,200.00	4,300.00
Robie Consolidated Concrete Co.....	Walter G. Africa.....	Manchester.	May 4, 1899	15,000	15,000	10,061.78	8,022.05	15,573.88

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.—Continued.

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
Roby & Swart Mfg. Co.....	Wm. D. Swart.....	Nashua.	July 1, 1897	\$50,000	\$50,000	\$100	\$38,238.24	\$62,857.46	\$90,057.03
Rochester Agricultural and Mechanical Assn.....	Chas. M. Bailey.....	Rochester.	July 18, 1879	5,000	5,000	50	.....	.....	10,545.95
Rockingham County L. & P. Co.....	F. P. Royce.....	Portsmouth.	Nov. 1, 1900	750,000	750,000	100	13,458.60	693,151.83	1,343,153.64
Roy & Boire Drug Co.....	F. M. Boire.....	Manchester.	July 5, 1899	40,000	40,000	25	1,267.26	6,881.03	47,751.70
Rumford Printing Co.....	Geo. H. Moses.....	Concord.	Nov. 29, 1897	40,000	40,000	100	23,425.59	21,406.52	32,429.04
Sampson Automatic Heel Burnishing Machine Co.....	H. H. Dustin.....	Manchester.	Nov. 25, 1889	50,000	50,000	50	.....	2,900.00	50,600.00
Sanbornton Telephone Co.....	O. M. Smith.....	Sanbornton.	Aug. 24, 1900	2,290	1,812.50	25	.....	.....	Tel. line
Saranac Glove Co.....	Henry F. Green.....	Littleton.	Dec. 31, 1889	125,000	125,000	100	179,332.09	217,184.75	382,318.22
Scott Mill Reservoir Co.....	S. S. Stone.....	Fitzwilliam.	Aug. 21, 1871	2,000	1,663	50	.....	.....	1,663.00
Sherman Mining and Milling Co.....	Louis P. Howe.....	Marlboro, Mass.	Dec. 24, 1885	500,000	500,000	5	.....	8,623.94	Mine
Shoe Blacking & Leather Dressing Machine Co.....	Chas. W. Emerson.....	Haverhill, Mass.	Jan. 5, 1898	150,000	150,000	25	.....	.....	Patents
Smith Box & Lumber Co.....	Bert J. Fellows.....	Manchester.	Feb. 13, 1902	10,000	10,000	100	12,659.64	6,322.26	5,917.59
Somersworth Building Co.....	E. A. Leighton.....	Somersworth	Aug. 26, 1884	17,000	17,000	10	.....	5,079.40	7,500.00

Somersworth Improvement Asso.....	Fred M. Varney.....	Somersworth.	Aug. 10, 1893	17,000	25	.....	7,500.00	10,000.00
Springfield Provision Co.....	E. C. Swift.....	46 Ames Bldg., Boston, Mass.,	May 18, 1889	250,000	100	393,169.98	481,064.82	769,349.33
Standard Electric Time Co.....	C. W. Tyler.....	Laconia.	Dec. 2, 1893	1,200	50	.....	.....	1,200.00
Star Stamp Co.....	Frank H. Challis.....	Manchester.....	April 22, 1901	5,000	50	331.41	367.58	5,841.41
Stark Mills.....	Sidney Coolidge.....	50 State Street, Boston, Mass.	July 2, 1898	1,250,000	1000	608,143.44	739,869.89	1,784,270.23
Stevens Granite Co.....	B. A. Pease.....	Nashua.	Aug. 25, 1894	20,000	100	3,546.73	6,301.05	34,511.06
Stoddard Lumber Co.....	M. L. Merrill.....	So. Stoddard.	May 24, 1884	99,000	100	7,013.91	3,459.35	100,000.00
Strafford Paper Co.....	Alton Faunce.....	Boston, Mass.	July 28, 1897	100,000	25	Sold	.....	.....
Sunapee Electric L. & P. Co.....	J. Arthur Fulton.....	Sunapee.	Oct. 22, 1896	5,000	100	142.45	1,672.59	5,500.00
Suncook Valley Creamery Co.....	Frank E. Blodgett.....	Suncook.	Sept. 11, 1896	1,950	25	976.61	886.65	4,609.98
Suncook Valley Lumber Co.....	J. B. Tennant.....	Short Falls.	April 2, 1901	13,000	100	31,340.05	20,147.11	3,393.05
Thomas A. Lane Co.....	Thomas A. Lane.....	Manchester.	Aug. 1, 1892	30,000	100	19,732.18	14,436.97	42,968.16
Thompson Mfg. Co.....	F. H. Twitchell.....	Lancaster.	Jan. 1, 1893	50,000	50	32,111.56	16,746.55	80,039.96
Tilton and New Hampton Tele- phone Co.....	G. H. Davis.....	Tilton.	Feb. 9, 1899	1,000	25	92.50	1,200.00	1,500.00
Toy Mfg. Co.....	J. C. Derby.....	Concord.	May 25, 1885	8,275	25	200.00	750.00	8,275.00
True W. Jones Brewing Co.....	Arthur A. Wayne.....	101 Commercial St., Boston, Mass.	Oct. 23, 1892	100,000	100	35,058.09	78,211.19	200,506.16
Union Hall Co.....	Geo. H. Tilton.....	Littleton.	Dec. 24, 1889	10,000	100	258.23	4,398.00	15,000.00
Union Publishing Co.....	Gordon Woodbury.....	Manchester.	July 27, 1880	200,000	100	32,482.15	197,137.31	196,506.16
United Gas & Electric Co.....	H. L. Shepherd.....	Dover.	Dec. 12, 1896	300,000	100	14,136.99	256,215.56	592,105.21
Warner Chemical Co.....	Geo. M. Gaffney.....	Warner.	Mar. 21, 1902	35,000	100	1,200.00	5,000.00	30,000.00

*Capital stock reduced to \$50,000, May 15, 1902.

ABSTRACT OF ANNUAL RETURNS OF CORPORATIONS, 1902.—Continued.

NAME OF CORPORATION	Treasurer	Postoffice address of treasurer	Date of incorporation	Authorized capital	Capital paid in	Par value of shares	Debts due to corporation	Debts due from corporation	Assets of corporation
Warren Separating Co.....	W. P. Goodrich.....	Warren.	May 8, 1900	\$25,000	\$25,000	\$25	\$225.00	\$2,125.00	\$6,000.00
Webster Mfg. Co.....	B. R. Weld.....	Boston, Mass.	June 20, 1882	500,000	500,000	100	30,959.00	5,775.00	150,000.00
W. E. Garland Co.....	J. H. Garland.....	Conway.	Oct. 12, 1901	10,000	3,000	100	2,013.61	2,892.53	5,961.61
Wetherbee Allis Co.....	Fred T. Wetherbee.....	Dover.	April 11, 1902	6,000	6,000	100	.....	.....	6,000.00
Whitefield Mfg. Co.....	Geo. W. Darling.....	Whitefield.	May 15, 1891	24,000	18,000	100	4,782.14	20,663.26	34,000.00
Whitefield Odd Fellows Land & Bldg. Asso.....	H. A. Graves.....	"	Mar. 18, 1895	2,500	2,500	25	175.00	2,050.00	6,000.00
White Mountain Grange Block Co.....	C. W. Bedell.....	Littleton.	May 18, 1885	1,200	725	5	15.00	50.00	725.00
White Mountain Mineral Spring Water Co.....	J. B. Mowry.....	So. Walpole, Mass.	Nov. 27, 1882	15,000	14,253.32	50	1,187.17	929.64	Uncertain
Wiggin, Young Co.....	Ben R. Young.....	Manchester.	Feb. 1, 1901	4,300	4,300	100	3,040.43	4,188.16	7,041.75
Wilkins Paper Box Co.....	C. L. Wilkins.....	Swampscott, Mass.	May 1, 1900	8,000	8,000	100	2,692.64	4,157.69	10,155.14
William B. Durgin Co.....	John B. Abbott.....	Concord.	Feb. 9, 1898	200,000	200,000	100	90,540.26	88,571.91	295,000.00
William Leonard Shoe Co.....	Wm. Leonard.....	Salem, Mass.	Nov. 7, 1900	15,000	15,000	25	.....	.....	.....
Wilton Telephone Co.....	W. H. Emerson.....	Wilton.	May 22, 1900	10,000	5,025	100	100.00	75.00	4,000.00

Winchester Gas Light Co.....	James H. Bliss.....	Winchester.	Oct. 10, 1898	5,000	1,125	25	107.18	50.00	1,000.00
Winchester Pile Cure Co.....	R. J. Pearce.....	Dorchester, Mass.	June 23, 1900	25,000	25,000	25	400.00	200.00	600.00
Winnepesaukee Gas & Electric Co.....	G. M. Rossman.....	Keene.	May 27, 1897	20,000	20,000	100	887.14	45,000.00	102,000.00
Winter Street Sewer Asso.....	E. G. Gammons.....	Ashland.	Aug. 23, 1900	300	300	10	.....	.....	300.00
Wolfeboro Construction Co.....	I. B. Manning.....	Wolfeboro.	Act of 1887	30,000	12,000	50	1,504.72	11,738.25	25,000.00
Wolfeboro Creamery Co.....	Chas. F. Parker.....	"	Jan. 26, 1895	3,000	3,000	25	.....	.....	3,000.00
Wolfeboro Woolen Mills.....	C. W. Springfield.....	"	Act of 1861	75,000	25,250	50	.....	.....	32,000.00
Woodsum Steamboat Co.....	John F. Jones.....	Concord.	Oct. 27, 1886	25,000	25,000	50	.....	.....	34,400.00
Xanax Electro Chemical Co.....	Aldis L. Waite.....	Everett, Mass.	Dec. 17, 1898	20,000	20,000	25	82.50	2,379.40	5,930.00

REPORT
OF
ATTORNEY-GENERAL
OF THE
STATE OF NEW HAMPSHIRE.

1900-1902.

CONCORD, N. H.:
1902.

RUMFORD PRESS, CONCORD, N. H.

REPORT OF THE ATTORNEY-GENERAL.

ATTORNEY-GENERAL'S OFFICE,

CONCORD, N. H., December 1, 1902.

In compliance with the law of this state, I herewith submit the biennial report of this office.

The attorney-general, during the two years preceding the above date, has, besides performing other duties pertaining to the office, assisted in the disposition and trial of the following cases :

INDICTMENTS FOR HOMICIDE.

George H. Briggs of Langdon was indicted for murder in the first degree for causing the death on November 2, 1901, at Langdon of Florence Jones by shooting with a revolver. The case was tried in January, 1902, at Newport. The respondent was convicted of murder in the second degree, and sentenced to the state prison for life. Hosea W. Parker, Charles W. Williams of Bellows Falls, Vt., and Frank O. Chellis defended, and Frank H. Brown, solicitor for Sullivan county, assisted on the part of the state.

George H. Greenleaf was indicted for killing Nancy J. Folsom at Boscawen on the 23d day of October, 1901. The respondent moved for a change of *venue* from Merrimack to Belknap county, and the court granted the motion. The trial took place at Laconia in February, 1902. The respondent was found guilty of murder in the first degree, and was sentenced to be hanged February 13, 1903. The case is now pending in the Supreme Court upon respondent's bill of exceptions. Nathaniel E. Martin, Charles F. Flanders, and W. S. Peaslee appeared for the respondent. David F. Dudley, solicitor for Merrimack county, and W. D. Veazey, solicitor

for Belknap county, acted with the attorney-general for the state.

Frank Villard, otherwise called Frank Willard, charged with manslaughter by causing the death of Leon H. Morgan on the 3d day of January, 1902, at Lempster, was tried at Newport in May, 1902. Willard was found guilty of manslaughter in the second degree, and was sentenced to the state prison for not more than three nor less than two years. The respondent was defended by Jesse M. Barton and Frank O. Chellis. F. H. Brown, solicitor for Sullivan county, assisted on the part of the state.

Lonice Folsom was indicted for manslaughter at the November term, 1901, for Belknap county. The respondent was charged with the killing of one Mary Downs by striking her with a lighted lamp. The alleged assault took place on the 7th day of September, 1901, and Downs died on the 10th day of the same month in consequence of burns received on the 7th day of September before named. The trial took place at Laconia, November 26, 1901, and resulted in the acquittal of the respondent. Edwin F. Shannon and Oscar L. Young appeared for the respondent, and William D. Veazey and the attorney-general for the state.

OTHER CRIMINAL CASES.

Andrew Blanchard of Windsor, Vt., was indicted at the May term of the Superior Court for Sullivan county for an assault, made on the 13th day of December, 1901, at Charlestown, upon one Napoleon St. Peters, with intent to kill. Case was tried at the May term, 1902. The respondent was found guilty of a simple assault. Hosea W. Parker and Flint of Vermont appeared for the defense, and F. H. Brown, solicitor for Sullivan county, assisted on the part of the state.

William E. Nichols of Ossipee was tried for felonious assault at the March, 1902, term of the Superior Court for Carroll county. The respondent was acquitted. Edwin F. Shannon and Arthur L. Foote defended, and Josiah H. Hobbs, solicitor for Carroll county, assisted in behalf of the state.

CIVIL SUITS.

State v. Manchester & Lawrence Railroad.

At the time when my report dated December 1, 1900, was filed the above named case was pending in the law term of the Supreme Court. Certain questions of law were raised by the defendant, and a decision was rendered upon the same at the March adjourned term, 1901. The questions decided by the court were :

1. That under section 11, chapter 128, Laws 1844, providing that when the net receipts of a railroad corporation shall exceed the average of 10 per cent. per annum on its expenditures from the commencement of operation, the excess shall be paid into the treasury of the state, such percentage is to be computed upon the sum actually contributed by the stockholders, and not upon the entire amount expended in the construction of the road. The defendants' contention was that the 10 per cent. was to be computed upon the entire amount expended in the construction of the road, and not upon the amount contributed by the stockholders as was claimed by the state.

2. The court further held that in an action to recover the excessive receipts of a railroad corporation under the above law it is incumbent upon the state to establish the fact that dividends paid to stockholders in excess of the legal amount came from the earnings or net receipts for the use of the road, and the state cannot prevail when it appears that such sums were derived from sources other than tolls collected of the public. After the above decision was made the case was re-committed to the referee, for the purpose of having him determine whether or not any part of the dividends paid to the stockholders by the defendant came from other sources than the earnings or net receipts for the use of the road. A hearing was had before the referee upon this question, and he found, as a fact, that about \$500,000 of the amount distributed to stockholders as dividends came from other sources than earnings or net receipts for the use of the road. This amount deducted from the total dividends paid left no excess above the amount which the stockholders were entitled to have.

That is, there was no excess above the 10 per cent. which the law gave them, consequently the judgment was for the defendant. The questions settled by the court in this case have been agitated and discussed at different times by the people of the state, but this decision of the court finally concludes the matter.

State of New Hampshire v. Manchester Savings Bank.

State of New Hampshire v. Amoskeag Savings Bank.

The questions involved in these two cases called for a construction by the court of chapter 108, Laws of 1895, which provides for a tax of three fourths of 1 per cent. upon the amount of general deposits on which savings banks are required to pay interest after deducting the value of all their loans secured by mortgage upon real estate situated in the state, made at a rate not exceeding 5 per cent. per annum. The defendant banks on the first day of April, 1900, were the owners of bonds of the Concord & Montreal Railroad and of the Concord & Claremont Railroad. These bonds bear interest at a rate less than 5 per cent., and are secured by first mortgage of all the real estate of these railroads situate wholly in New Hampshire and being taxed by said state, and all other property of said roads, including equipment, stocks, bonds, franchises, rights, and privileges of every kind.

The defendants claimed that under said chapter 108 the amount of these bonds was to be deducted from their general deposits, when they made return of deposits for taxation, on the ground that these bonds were loans secured by mortgage upon real estate situated in New Hampshire. The state's contention was that they were not loans secured by mortgage upon real estate as intended by this statute, and, further, that the meaning of the law was that loans so secured must be secured upon real estate alone. The contention of the state was sustained by the court, and there is to be judgment for the plaintiff for the sum of \$2,722.50.

ATTORNEY-GENERAL AND DAVID H. GOODELL

v.

WOODBURY AND ALS. AND HEALEY, RESPECTIVELY POLICE COMMISSIONERS AND CHIEF OF POLICE OF THE CITY OF MANCHESTER.

This was a petition for a writ of *mandamus* requiring all the defendants to prosecute the persons named in the petition for violation of chapter 112 of the Public Statutes, which relates to the illegal sale of spirituous and intoxicating liquors, and the petition especially asked for the enforcement of section 16 of that chapter, which provides for the punishment of persons engaged as common sellers of spirituous liquor. The case was tried in the Superior Court before Mr. Justice Peaslee and the petition as against the police commissioners was dismissed solely upon the ground that the duty of enforcing the provisions of the above named chapter is not imposed upon them, but that it is the duty of the chief of police of that city to enforce this law, and that having failed to do so, the prayer of the petition as against him was granted. The questions of law arising in the case were transferred to the Supreme Court and the ruling at the trial term was there sustained. The question as to the duty of the police commissioners was not submitted to the Supreme Court, the decision of Mr. Justice Peaslee not being questioned by either side.

THE OLEOMARGARINE CASE.

CLARENCE E. COLLINS, PLAINTIFF IN ERROR,

v.

THE STATE OF NEW HAMPSHIRE, DEFENDANT IN ERROR.

The plaintiff in error was indicted at the September, 1895, term of the Supreme Court for the County of Hillsborough for selling a package of oleomargarine not of some other color than that of yellow butter, in violation of section 1, chapter 115, Laws of 1895. There was a trial upon this indictment at said September term and a verdict of guilty was rendered by the jury under instruction of the court. Upon the trial the

following facts were found: The respondent at the time of the alleged offense was the agent at Manchester of Swift & Company, an Illinois corporation, having its place of business in Chicago. This corporation manufactures oleomargarine, puts it up in Chicago, and distributes the packages to different places, one of which is Manchester, where it has a store and sells the article at wholesale in original packages. It paid the special taxes imposed by the act of congress of August 2, 1886, and complied with all other requirements of that act and all other acts of congress relating to the manufacture and sale of oleomargarine, and with all the rules prescribed by the commissioner of internal revenue, with the approval of the secretary of the treasury, and with all the laws of commerce relating to the packing, marking, stamping, branding, labeling, and affixing notices to packages containing oleomargarine.

The article is of the color of yellow butter. The coloring matter used being the same as that used in coloring butter. It is not produced from unadulterated milk or cream from the same, and is manufactured and sold for use in the place of and as a substitute for butter. The respondent, as such agent, sold at wholesale at the company's store in Manchester an original unbroken package of the article, weighing ten pounds, in the form in which it came to him from his principal in Chicago. The provisions of the statutes of New Hampshire relating to oleomargarine were complied with, excepting that in respect to color. The article thus sold was the oleomargarine of commerce, as recognized by the laws of the United States and known and dealt in as an article of food. It was free from any unwholesome or injurious ingredient, and was branded and stamped in accordance with the internal revenue laws of the United States. There was no fraud or deception in the sale. Manufacturers of oleomargarine are unable to comply with the laws of New Hampshire on the subject and sell this product.

The respondent claimed at the trial that upon the foregoing facts he was not guilty, because the statute in question is in contravention of the constitution of the United States and its

amendments and the laws of congress, and asked the court to direct a verdict in his favor, which the court declined to do. He thereupon excepted and the case was transferred to the law term of our Supreme Court, and at the March adjourned term, 1900, the court overruled the exceptions and ordered judgment on the verdict; at the following April trial term a fine of \$50 was imposed on the plaintiff in error.

The plaintiff contended in the state court :

(I) That the statute under which he was indicted is in contravention of section 8, article I, Constitution of the United States, which provides that Congress shall have power "to regulate commerce with foreign nations and among the several states and with the Indian tribes."

(II) That said statute is in contravention of that portion of article 6, of the Constitution of the United States which declares, "this constitution and the laws of the United States which shall be made in pursuance thereof, and all treaties made or which shall be made under the authority of the United States shall be the supreme law of the land, and the judges in every state shall be bound thereby, anything in the constitution or laws of any state to the contrary notwithstanding."

(III) That said statute or law is in contravention of the statute of the United States, in relation to special taxes, passed August 2, 1886.

The overruling of these several contentions by our Supreme Court constituted the error in law complained of on account of which the plaintiff in error, Collins, transferred the case to the Supreme Court of the United States upon a writ of error. In that court William D. Guthrie, Esq., of New York city, appeared for the plaintiff and the attorney-general of this state for the defendant. Briefs were furnished and the case was argued orally before the United States Supreme Court in April last. At the October term, 1902, of the United States Supreme Court, it was announced that the court were equally divided in opinion respecting the questions submitted and consequently the law of the state of New Hampshire was sustained. The result is one of considerable consequence to dairymen in this state as well as elsewhere, although the recent act of congress

relative to the subject of oleomargarine makes the decision of less consequence than it would have been but for the passage of the act named.

THE NORTH POND CASE.

THE PERCY SUMMER CLUB *v.* JOSEPH C. ASTLE ET AL.

This is a bill in equity brought by the plaintiff, a corporation which claims to own North pond, or as it is now called, Christine lake, located in the town of Stark, in Coös county, and it is claimed that by virtue of such ownership said corporation is entitled to the sole and exclusive right of fishing in this lake. It is alleged that the defendants entered upon this lake and the land surrounding it and interfered with the plaintiff's alleged right by fishing upon and from the shore of said lake and catching and taking therefrom large quantities of trout. Christine lake is a natural body of water and has an area of more than twenty acres. The legislature of New Hampshire deeming the questions raised by this case important to the people of the state, in 1901 passed a joint resolution directing the attorney-general to appear and defend, in behalf of the people of the state, suits now pending or which may hereafter be brought in the federal court, in which the rights of the citizens of New Hampshire in public waters and land are sought to be restrained, limited or abrogated, and to employ such assistance as he may deem necessary in said defense. Pursuant to the direction contained in this joint resolution the attorney-general moved for leave to appear in this suit. His right to do so was denied by the plaintiff but the court granted the motion after a full hearing upon the question.

Evidence has been taken in the case and it is now about ready for submission to the court.

Many matters relating to petitions for abatement of taxes by savings banks, actions of *quo warranto* and the like have received attention from this department, but as they are not of general public interest a report concerning them is not deemed necessary.

I have received no money belonging to the state within the last two years.

The law makes it incumbent upon the county solicitors to report concerning the transactions connected with their duties in the various counties; consequently, the information to be obtained from these reports need not be reproduced here. Numerous opinions have been furnished to the various departments, some of which appear in the reports of those departments; consequently it is not deemed essential to reproduce them at this time.

Respectfully submitted,

EDWIN G. EASTMAN,
Attorney-General.

VALUATION AND TAXATION

OF THE

STATE OF NEW HAMPSHIRE

WITH

EQUALIZATION AND APPORTIONMENT

FOR THE YEAR 1902.

COMPILED BY THE SECRETARY OF THE STATE BOARD OF EQUALIZATION.

BOARD.

CHARLES MCDANIEL, Chairman	.	.	Springfield.
WILLIAM B. FELLOWS, Secretary	.	.	Tilton.
EDWIN SNOW	.	.	Eaton.
GEORGE W. SANBORN	.	.	East Kingston.
ORANGE S. BROWN	.	.	Rollinsford.

CONCORD, NEW HAMPSHIRE.

1902.

PRINTED BY IRA C. EVANS CO., CONCORD.
BOUND BY RUMFORD PRINTING CO., CONCORD.

REPORT OF STATE BOARD OF EQUALIZATION.

December 1, 1902.

The board submit herewith a statement of the assessment of taxes for the current year upon the railroad, telegraph and telephone companies of the state; a compilation of the inventories of all towns and cities; the equalized valuation of towns and cities with the proposed sum to be paid by each on each \$1,000 of the state tax; a comparative table of apportionment acts beginning with that of 1879.

The inventory valuation of the state has increased \$9,881,924 since 1898, and the taxes assessed in 1902 exceed those of 1898 by \$405,886.

The amount of tax paid by railroad corporations this year is \$394,893.65, of which the state retains \$171,110.69, and the assessed valuation of the same corporations is \$22,695,038.

The railroad tax is paid by the corporations to the state treasurer, and divided as follows: One entire fourth part to towns through which the roads pass, for right of way and buildings, proportioned to expenditure for the same; the other three fourths to each town in the state, such portion thereof as the number of shares owned in said town bears to the whole number of shares in the corporation; and the balance of the said three fourths (non-resident) directly to the state, and is a part of its revenue.

To secure a valuation on railroad property, equally assessed against the corporations and the towns, the board adopted the following method: deduct from the assessed valuation of each corporation one fourth, representing the one fourth part of the tax distributed on account of right of way, divide the remainder by the entire number of shares of the capital stock of the corporation. The quotient represents the actual value of each share of stock. The number of shares held in each town have been multiplied by the several quotients thus obtained. To the sum of these products have been added the amounts expended for right of way and buildings.

The total increase of valuation added to towns in this way is \$12,679,536.

The non-resident stock represents the remaining \$10,015,502 of railroad valuation, upon which the state receives the entire tax and the towns receive no benefit.

For this reason the board have deemed it just to add to the towns that part of the railroad valuation properly belonging to them, though in the past the legislature has impressed on them the total valuation.

The following table shows the number of shares of stock of each railroad corporation, the number of shares owned in this state, the actual value per share figured as indicated above, and the amount charged to towns for each corporation on account of the right of way and stock in the towns.

The seeming inconsistency in figuring Boston & Maine stock at \$11 a share when its market value is nearly \$200 arises because its 267,834 shares must represent the property of the corporation in New Hampshire alone, when, in fact, they represent all its property wherever located. Only 27,634 shares are owned in New Hampshire, upon which towns receive

the proportion of three fourths the tax of \$68,991 those figures bear to the whole number of shares, while the state retains the tax represented by the remaining 240,200 shares.

At the valuations set upon the shares of stock of the several railroad corporations, the towns receive about $.01 \frac{3}{10} \%$ net income on each \$100, whether in Boston & Maine at \$11 a share, Concord & Portsmouth at \$128, or Nashua, Acton & Boston at \$3.

TABLE.

CORPORATIONS.	Number of shares of stock.	Number of shares held in towns.	Amount per share charged to towns.	Amount charged towns for stock and right of way.
Boston & Maine.....	267,834	27,634	\$11	\$991,036
Concord & Montreal.....	71,976	55,891	75	6,263,770
Concord & Claremont.....	4,124	4,124	90	507,819
Concord & Portsmouth.....	3,500	3,170	128	534,320
Concord Street.....	1,000	451	40	63,540
Connecticut River.....	26,300	668	8	103,647
Fitchburg.....	243,600	8,035	5	342,188
Grand Trunk.....				83,997
Laconia Street.....	2,000	1,323	11	34,553
Manchester & Lawrence.....	10,000	5,637	112	848,037
Manchester & Keene.....				34,046
Manchester Street Railway.....	5,205	5,205	39	233,008
Mount Washington.....	2,115	1,520	35	53,200
Nashua, Acton & Boston.....	5,000	4,444	3	56,279
Nashua & Lowell.....	8,000	2,146	35	227,084
Nashua Street.....	3,000	1,231	26	63,122
Northern.....	30,680	14,037	57	1,070,791
Peterborough.....	3,850	2,785	10	62,350

Peterborough & Hillsborough.....	450	450	83	58,514
Pennigewasset Valley.....	5,415	3,903	22	116,398
Portland & Ogdensburg.....	43,909	1,050	5	108,581
Sullivan County.....				40,579
Suncook Valley.....	3,417	3,212	29	125,884
Upper Coos.....	3,500	652	17	52,394
Wilton.....	2,400	2,052	93	241,294
Whitefield & Jefferson.....	7,893	7,893	12	110,616
Worcester, Nashua & Rochester.....	30,998	2,095	29	252,489
Totals.....	786,166	159,611	.....	\$12,679,536
Stock owned by residents.....	159,611			
Stock owned by non-residents.....	626,555			

RAILROAD, TELEGRAPH, AND TELEPHONE TAX FOR 1902.

A deduction has been made from the valuations of all sums assessed in towns and paid by the railroads upon their property not required for general use in the running of the roads. The amount thus obtained has been assessed at the average rate of property taxation throughout the state, to wit: \$1.74 upon each \$100 of taxable property. The following table will indicate how the "average rate" of taxation is determined. The law governing the actions of the Board of Equalization will be found in Public Statutes Chap. 15, Sec. 9; Chap. 43, Sec. 13; Chap. 63, Chap. 64.

1902.			
Total inventory valuation of towns.....	\$213,026,655		
Total valuation unincorporated places.....	1,590,000		
	<u>\$214,616,655</u>		
Savings-bank deposits taxable.....	47,139,662		
Insurance capital.....	1,495,000		
	<u>\$263,251,317</u>		
1902			
Taxes assessed in towns and rate.....	\$4,212,046.07	\$1.98	
Taxes assessed in unincorporated places.....	7,648.48	.48	
	<u>\$4,219,694.55</u>	\$1.96	
Taxes on savings-bank deposits.....	356,437.83		
Taxes on insurance capital.....	14,950.00	1.00	
	<u>\$4,591,082.38</u>	\$1.74	
1901.			
Total inventory valuation of towns.....	\$211,097,051		
Total valuation unincorporated places.....	1,590,000		
	<u>\$212,687,051</u>		
Savings-bank deposits taxable.....	45,164,178		
Insurance capital.....	1,475,000		
	<u>\$259,326,229</u>		
1901			
Taxes assessed in towns and rate.....	\$4,026,704.06	\$1.91	
Taxes assessed in unincorporated places.....	8,236.69	.51	
	<u>\$4,034,940.75</u>	1.90	
Taxes upon savings-bank deposits.....	341,784.58		
Taxes upon insurance capital.....	14,750.00		
	<u>\$4,391,475.33</u>	1.69	

VALUATION AND TAXATION.

9

Increase of inventory valuation in 1902 over 1901.....	\$1,929,604.00
“ savings-bank deposits same period.....	1,975,484.00
“ insurance capital same period.....	20,000.00
“ taxes in towns same period.....	185,342.01
“ savings-bank tax same period.....	14,653.25
“ insurance capital tax same period.....	200.00
“ railroad, telegraph, and telephone tax same period....	12,371.97
Decrease of tax in unincorporated places same period.....	588.21

VALUATION AND ASSESSMENT OF RAILROAD CORPORATIONS FOR 1902.

NAMES OF ROADS.	Valuation.	Amount in towns.	Value for taxation.	Tax.
Boston & Lowell...	\$60,000	\$9,200	\$50,800	\$883.92
Boston & Maine...	4,125,000	160,000	3,965,000	68,991.00
Concord & Claremont...	500,000	3,800	496,200	8,633.88
Concord & Montreal...	7,352,000	131,000	7,221,000	125,645.40
Concord & Portsmouth...	600,000	.....	600,000	10,440.00
Connecticut River	325,000	14,400	310,600	5,404.44
Fitchburg	1,635,000	33,800	1,601,200	27,860.88
Grand Trunk	400,000	11,500	388,500	6,759.90
Manchester & Lawrence...	1,500,000	3,300	1,496,700	26,042.58
Mount Washington.....	125,000	25,000	100,000	1,740.00
Nashua, Acton & Boston ..	20,000	2,000	18,000	313.20
Nashua & Lowell.....	400,000	27,600	372,400	6,479.76
Northern.	2,370,000	11,300	2,358,700	41,041.38
Pennigewasset Valley.....	160,000	.....	160,000	2,784.00
Peterborough.....	50,000	700	49,300	857.82
Peterborough & Hillsborough	50,000	.....	50,000	870.00
Portland & Ogdensburg.....	300,000	3,236	296,764	5,163.69
Sullivan County.....	750,000	.....	750,000	13,050.00
Suncook Valley.	140,000	4,500	135,500	2,357.70
Upper Coos.....	80,000	500	79,500	1,383.30
Whitefield & Jefferson...	125,000	.....	125,000	2,175.00
Wilton.....	300,000	2,100	297,900	5,183.46
Worcester, Nashua & Rochester.....	1,200,000	13,900	1,186,100	20,638.14

Concord Street Railway	55,000	1,000	54,000	939.60
Laconia & Lake Village Street Railway	40,000	10,000	29,400	511.56
Manchester Street Railway	275,000	3,000	272,000	4,732.80
Nashua Street Railway.	110,000	4,526	105,474	1,835.24
Dover, Somersworth & Rochester Street Railway	125,000	.....	125,000	2,175.00
	\$23,172,000	\$476,962	\$22,695,038	\$394,893.65

TELEPHONES.

NAMES.	Valuation.	Tax.
Citizens	\$15,000	\$261.00
Colebrook, Stewartstown & Conn. Lake..	600	10.44
Exeter.....	500	8.70
Granite State.....	500	8.70
Kearsarge.....	1,500	26.10
Merrimack County.....	1,000	17.40
New England.....	335,000	5,829.00
Northern.....	15,000	261.00
Ossipee Valley.....	2,500	43.50
Plymouth & Campton.....	18,000	313.20
Potter Place & New London.....	700	12.18
Sanbornton.....	300	5.22
Tilton & New Hampton.....	700	12.18
Wilton.....	3,000	52.20
Woodsville	2,000	34.80
	\$396,300	\$6,895.62

TELEGRAPHS.

NAMES.	Valuation.	Tax.
American Telegraph Co.....	\$2,000	\$34.80
Commercial Union.....	10,000	174.00
Direct U. S. Cable.....	8,000	139.20
Great North Western.....	5,000	87.00
Maine.	10,000	174.00
Western Union.....	110,000	1,914.00
	\$145,000	\$2,523.00

APPORTIONMENT OF SALARIES AND EXPENSES OF
RAILROAD COMMISSIONERS FOR YEAR ENDING
JUNE 1, 1902.

NAMES.	Gross receipts.	Proportion of expenses.
Boston & Maine.....	\$6,060,140	\$6,060.14
Grand Trunk.....	386,500	386.50
Mt. Washington.....	23,293	23.29
Portland & Ogdensburg.....	294,777	294.77
Sullivan County	272,541	272.54
Upper Coos.....	93,877	93.87
Concord Street.....	77,929	77.92
Laconia Street.....	22,365	22.36
Manchester Street.....	235,171	235.17
Nashua Street.....	68,272	68.27
Dover, Somersworth & Rochester Street..	45,234	45.23
	\$7,580,099	\$7,580.06

Proportion of other roads included in Boston & Maine.

The telegraph and telephone tax is paid to the state treasurer and not divided, but held by the state as part of its revenue.

The expense of the railroad commission is met by a tax levied on the gross receipts of the railroads. Its amount is \$7,580.06 against \$7,343.67 in 1901.

The amount of tax assessed upon the railroad, telegraph, and telephone properties in this state since the formation of the Board of Equalization has been annually as follows: 1879, \$215,094.72; 1880, \$176,192.44; 1881, \$185,109.85; 1882, \$170,871.58; 1883, \$194,757.97; 1884, \$206,688.69; 1885, \$194,358.47; 1886, \$213,337.27; 1887, \$220,538.70; 1888, \$242,994.79; 1889, \$246,186.32; 1890, \$472,500.20; 1891, \$287,849.31; 1892, \$306,661.30; 1893, \$312,920.13; 1894, \$315,313.91; 1895, \$320,382.38; 1896, \$338,359.11; 1897, \$357,926.51; 1898, \$360,666.69; 1899, \$368,081.26; 1900, \$391,860.24; 1901, \$391,940.30; 1902, \$404,312.27.

TABLE NO. 1.

Number of Ratable Polls, Valuation, Live Stock,
and Amount of Taxes in Each Town as
returned by the Assessors for 1902.

TABLE No. 1.

Number of Ratable Polls, Valuation, Live Stock, and Amount of Taxes in Each Town as returned by the Assessors for 1902.

ROCKINGHAM COUNTY.

Towns.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Atkinson	141	\$7,725	\$54.78	.....	.....	.....	2	\$100	\$50.00	436	\$11,650	\$26.72
Auburn	147	7,940	54.01	.....	.....	.....	2	120	60.00	292	7,662	26.24
Brentwood.	213	12,820	60.18	1	\$50	\$50	22	1,150	52.27	416	10,765	25.87
Candia	262	10,190	38.90	.....	.....	.....	4	225	56.25	334	8,511	25.48
Chester.	236	11,335	48.03	.....	.....	.....	16	600	37.50	366	8,817	24.14
Danville	107	5,584	52.18	.....	.....	.....	4	230	57.50	107	3,054	28.54
Deerfield.	392	20,076	51.21	1	16	16	74	5,254	71.00	571	13,633	23.87
Derry.	462	22,195	48.04	.....	.....	.....	8	465	58.12	571	15,815	27.69
East Kingston.	161	8,559	53.16	.....	.....	.....	24	1,370	57.08	193	4,937	25.58
Epping	320	21,090	65.90	1	25	25	28	1,425	50.89	349	9,959	28.53
Exeter.	436	29,200	66.97	.....	.....	.....	26	1,450	55.77	281	7,905	28.13
Fremont.	144	9,475	65.80	.....	.....	.....	10	375	37.50	155	4,625	29.83
Greenland	207	12,410	59.95	.....	.....	.....	8	465	58.12	594	16,574	27.90

TABLE No. 1.—Continued.

ROCKINGHAM COUNTY.

TOWNS.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Atkinson	56	\$925	\$16.51	11	\$50	\$4.54	5	\$50	\$10.00	...	...	...	\$685
Auburn	52	924	17.76	36	119	3.30	5	200	20.00	...	...	...	500
Brentwood	91	1,396	15.34	24	85	3.54	10	...	...	150	\$75	...	...
Candia	71	1,412	19.88	4	16	4.00	...	...	...	...	...	...	...
Chester	78	1,270	16.28	28	86	3.07	...	...	...	...	...	...	...
Danville	16	338	21.12	...	...	...	...	...	...	...	...	...	...
Deerfield	250	5,917	23.66	284	904	3.18	6	84	14.00	...	80	...	100
Derry	82	1,181	14.44	12	40	3.33	12	120	10.00	400	100	...	5,700
East Kingston	52	965	18.55	13	39	3.00	1	10	10.00	50	20	...	900
Epping	100	1,981	19.81	48	150	3.12	6	48	8.00	...	...	...	1,680
Exeter	33	665	20.15	7	35	5.00	8	80	10.00	600	300	194	17,550
Fremont	31	650	20.97	38	155	4.07	...	...	...	...	...	...	400
Greenland	84	1,633	19.44	32	87	2.71	...	...	...	...	...	...	2,590
Hampstead	45	829	18.42	32	96	3.00	6	70	11.66	...	575	...	4,025
Hampton	41	695	16.95	24	125	5.20	...	...	...	800	315	5	380

VALUATION AND TAXATION.

21

Hampton Falls....	93	1,697	18.24	63	252	4.00	3	35	11.66	595	297	.....	1,130
Kensington	98	2,172	22.15	131	393	3.00	.....	.....	.....	415	215	.....	.....
Kingston	40	648	16.20	29	75	2.58	.....	.....	.....	.....	.....	.....	.....
Londonderry	122	2,244	18.39	47	193	4.10	3	30	10.00	640	302	.....	2,940
Newcastle.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	78	6,150
Newfields	12	200	16.66	21	63	3.00	.....	.....	.....	.....	.....	.....	.....
Newington	43	675	15.69	8	24	3.00	2	25	12.50	490	245	.....	1,720
Newmarket	96	1,881	19.59	28	110	3.92	10	100	10.00	.....	.....	35	2,045
Newton.....	20	339	16.95	.....	.....	.....	.....	.....	.....	375	165	.....	390
North Hampton...	83	1,308	15.75	75	265	3.53	55	371	6.74	75	30	140	4,050
Northwood.....	102	1,829	17.83	108	311	2.88	.....	.....	.....	.....	.....	.....	700
Nottingham	86	2,006	23.32	190	614	3.23	.....	.....	.....	250	83	.....	.....
Plaistow	4	75	18.75	.....	.....	.....	9	52	5.77	.....	.....	73	2,356
Portsmouth	108	2,285	21.15	128	491	3.83	43	475	11.04	.....	267	.....	47,473
Raymond.....	104	2,554	24.55	139	494	3.56	.....	.....	.....	.....	.....	.....	.....
Rye,	66	950	14.39	58	226	3.89	3	36	12.00	990	396	87	6,045
Salem	118	2,106	17.84	36	110	3.05	62	640	10.35	3,775	1,889	40	3,100
Saudown	32	570	17.81	15	60	4.00	1	10	10.00	.....	.....	13	650
Seabrook, ...	37	578	15.62	16	48	3.00	.....	.....	.....	.....	.....	3	200
South Hampton...	28	549	19.60	15	81	5.40	.....	.....	.....	100	50	.....	100
Stratham	78	1,426	18.28	42	126	3.00	4	35	8.75	.....	.....	33	1,230
Windham	72	1,322	18.36	2	6	3.00	.....	.....	.....	420	210	5	300
Total	2,524	\$18,201	\$19.09	1,744	\$5,929	\$3.40	249	\$2,471	\$9.92	10,125	\$5,614	706	\$115,089

TABLE No. 1.—Continued.
ROCKINGHAM COUNTY.

Towns.	Improved and un- improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corpora- tions out of this state.	Surplus capital in banking institu- tions.	Money on hand, at interest, or on deposit.	Stock in trade.
Atkinson.....	\$232,840	.....	.....	.....	.....	\$31,680	\$5,115
Auburn.....	271,506	.....	.....	.....	.....	6,875	27,750
Brentwood.....	199,550	.....	\$200	.....	.....	12,900	18,600
Candia.....	279,750	.....	2,000	.....	.....	1,450	11,395
Chester.....	295,505	.....	4,955	.....	.....	2,700	15,016
Danville.....	153,762	.....	.....	.....	.....	.....	17,000
Deerfield.....	308,126	.....	3,400	.....	.....	.....	46,374
Derry.....	1,066,250	.....	31,304	\$51,800	.....	8,298	59,150
East Kingston.....	176,382	.....	.....	.....	.....	.....	25,440
Epping.....	506,490	.....	3,686	.....	.....	.....	80,330
Exeter.....	2,466,277	\$2,800	14,500	.....	.....	4,100	222,800
Fremont.....	192,640	.....	.....	.....	.....	26,410	35,655
Greenland.....	297,266	2,500	16,025	.....	.....	5,593	1,250
Hamstead.....	299,233	.....	3,500	.....	.....	8,100	12,900
Hampton.....	694,193	.....	4,838	.....	.....	3,600	10,600
Hampton Falls.....	238,277	2,000	312	.....	.....	3,950	4,950
Kensington.....	207,880	.....	700	.....	.....	.....	5,290

Kingslon	282,629	.....	900	.....	.....	4,500	10,825
Londonderry	429,835	.....	4,700	.....	.....	14,065	41,650
Newcastle	270,717	.....	7,600	.....	.....	.....	2,200
Newfields	197,506	.....	2,362	.....	.....	7,100	7,100
Newington	192,730	.....	3,124	.....	.....	800	.....
Newmarket	677,995	.....	10,362	.....	.....	31,500	102,275
Newton	300,110	.....	.....	.....	.....	1,150	21,350
North Hampton	588,866	200	19,750	.....	20,300	2,000	12,600
Northwood	369,006	.....	4,928	.....	.....	7,191	23,725
Nottingham	235,152	.....	1,200	.....	.....	500	41,326
Plaistow	281,358	.....	.....	.....	.....	850	22,810
Portsmouth	7,011,264	7,485	339,213	.....	.....	120,606	1,121,736
Raymond	361,441	.....	.....	.....	.....	.....	16,750
Rye	607,961	.....	4,400	.....	.....	4,425	2,600
Salem	607,182	.....	1,100	.....	300	20,600	16,200
Sandown	122,430	.....	1,500	.....	.....	.....	9,600
Seabrook	234,722	.....	.....	.....	.....	900	3,315
South Hampton	161,291	.....	.....	.....	.....	1,450	3,850
Stratham	331,310	.....	.....	.....	1,000	9,695	7,980
Windham	270,578	.....	.....	.....	.....	5,600	11,630
Total	\$21,423,376	\$14,985	\$186,559	\$76,400	.....	\$318,918	\$2,081,867

TABLE No. 1.—Continued.
ROCKINGHAM COUNTY.

Towns.	Polls.		Aqueducts, locks and canals, toll bridges, wharves, ferries.	Mills, factories, and machinery.	Buildings not designated.	Amount of inventory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Atkinson.....	124	\$12,400	.....	\$600	.....	\$303,770	\$1,232.78	1.40
Auburn.....	169	16,900	.....	2,275	.....	342,621	4,625.38	1.35
Brentwood.....	167	16,700	.....	9,050	\$100	283,611	4,112.80	1.45
Candia.....	243	24,300	.....	1,000	.....	340,249	6,566.80	1.93
Chester.....	200	20,000	.....	6,150	.....	366,434	5,496.51	1.50
Daumville.....	146	14,600	.....	3,174	.....	197,742	3,420.93	1.73
Deerfield.....	327	32,700	.....	7,600	.....	452,562	3,887.10	.86
Derry.....	819	81,900	.....	61,250	.....	1,400,273	33,977.60	2.42
East Kingston.....	123	12,300	.....	4,800	.....	235,722	2,946.52	1.25
Epping.....	429	42,900	.....	22,900	500	697,267	13,736.69	1.97
Exeter.....	926	92,600	.....	186,900	.....	3,069,502	53,716.28	1.75
Fremont.....	154	15,400	.....	10,300	.....	269,975	3,806.65	1.41
Greenland.....	132	13,200	.....	750	300	370,343	5,555.15	1.50
Hamstead.....	196	19,600	.....	7,500	.....	378,353	6,630.41	1.75
Hampton.....	321	32,100	.....	2,270	.....	770,766	9,320.97	1.21
Hampton Falls.....	157	15,700	.....	600	.....	289,858	4,202.94	1.45
Kensington.....	126	12,600	.....	400	.....	251,247	3,366.70	1.34

Kingston.....	268	26,800	.....	3,675	.....	344,983	6,556.12	1.90
Londonderry.	349	34,900	.....	8,650	.....	584,472	9,585.34	1.64
Newcastle	134	13,400	\$2,550	.....	.....	308,041	5,130.81	1.66
Newfields.....	139	13,900	.....	4,150	.....	210,179	5,043.66	2.10
Newington.....	95	9,500	.....	500	.....	227,618	3,818.32	1.67
Newmarket.....	588	58,800	.....	414,475	.....	1,329,858	27,262.10	2.05
Newton	238	23,800	.....	7,975	.....	368,447	6,816.27	1.85
North Hampton	207	20,700	.....	4,200	.....	701,242	8,111.54	1.15
Northwood	318	31,800	.....	1,675	.....	461,465	8,592.50	1.85
Nottingham.....	220	22,000	.....	13,700	.....	336,111	6,722.00	2.00
Plaistow.....	250	25,000	.....	6,700	.....	352,946	6,705.97	1.90
Portsmouth.....	2,501	250,100	.....	.....	.....	9,009,880	198,006.00	2.20
Raymond.....	332	33,200	.....	4,300	.....	447,710	10,657.12	2.38
Rye.....	276	27,600	.....	400	.....	681,284	9,197.33	1.35
Salem	456	45,600	4,000	31,150	.....	772,073	15,441.46	2.00
Sandown	115	11,500	.....	3,150	.....	156,795	2,618.50	1.67
Seabrook.....	414	41,400	.....	.....	.....	288,528	5,972.32	2.07
South Hampton.....	81	8,100	.....	1,600	50	189,449	2,424.95	1.28
Stratham.....	148	14,800	.....	1,500	.....	395,000	5,940.78	1.50
Windham	145	14,500	.....	11,150	.....	336,395	5,382.32	1.60
Total.....	12,033	\$1,203,300	\$6,550	\$846,469	\$950	\$27,556,401	\$519,607.62	1.88

TABLE No. 1.—Continued.
STAFFORD COUNTY.

TOWNS.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Barrington	396	\$19,146	\$18.34	.....	.....	.....	24	\$1,401	\$58.50	545	\$15,668	\$28.71
Dover	1,089	86,915	79.81	.....	.....	.....	14	975	69.54	760	22,005	29.01
Durham	257	19,385	75.42	.....	.....	.....	12	940	78.33	426	12,382	29.06
Farmington	405	20,445	50.48	1	\$5.00	\$5.00	89	4,145	46.57	471	8,975	19.05
Lee	195	9,418	48.45	.....	.....	.....	36	2,004	55.66	406	10,678	26.30
Madbury	135	8,590	63.62	.....	.....	.....	24	1,700	70.83	275	7,862	32.95
Middleton	90	3,665	40.72	.....	.....	.....	22	1,185	53.86	91	2,039	21.69
Milton	300	16,355	54.51	.....	.....	.....	40	2,560	64.00	289	7,510	25.98
New Durham	206	8,990	43.64	1	15.00	15.00	40	2,195	54.87	270	5,859	21.70
Rochester	1,069	61,698	57.71	.....	.....	.....	54	3,780	70.00	975	26,628	27.31
Rollinsford	160	11,170	69.18	.....	.....	.....	4	325	81.25	417	13,275	31.82
Somersworth	374	23,261	62.20	.....	.....	.....	2	60	30.00	200	5,520	27.60
Stafford	357	17,200	48.17	.....	.....	.....	54	2,805	51.94	677	17,444	25.76
Total	5,033	\$306,271	\$60.85	2	\$20.00	\$10.00	415	\$24,078	\$58.01	5,805	\$155,845	\$26.81

STRAFFORD COUNTY.

Towns.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Barrington	192	\$3,811	\$19.84	135	\$107	\$3.01	4	\$50	\$12.50	40	\$20	218	\$1,932
Dover	113	2,013	17.81	65	195	3.00	11	210	19.09	.....	71	.....	27,460
Durham	100	2,166	21.66	159	636	4.00	.....	.....	.....	.....	.....	28	2,325
Farmington	147	2,488	16.92	130	389	2.99	19	115	7.63	.....	.....	145	5,880
Lee	115	2,060	17.91	155	452	2.91	.....	.....	.....	.....	.....	2	200
Madbury	81	1,382	17.06	73	219	3.00	.....	.....	.....	.....	.....	.....	200
Middleton	74	1,489	20.12	117	325	2.77	.....	.....	.....	125	50	47	2,350
Milton	57	1,020	17.89	150	430	2.86	.....	.....	.....	.....	.....	.....	.....
New Durham	99	1,772	17.90	51	147	2.88	.....	.....	.....	.....	.....	.....	.....
Rochester	179	3,314	18.51	141	416	3.16	7	80	11.42	1,000	500	902	25,790
Rollinsford	9	465	51.66	44	151	3.50	4	40	10.00	.....	.....	7	475
Somersworth .....	.....	.....	.....	22	130	5.90	5	50	10.00	.....	.....	153	7,701
Strafford	219	4,886	22.31	149	487	3.26	.....	.....	.....	.....	.....	.....	2,550
Total	1,385	\$26,866	\$19.39	1,391	\$4,417	\$3.17	50	\$575	\$11.50	1,165	\$614	1,502	\$76,866

TABLE No. 1.—Continued.

STRAFFORD COUNTY.

Towns.	Improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corpora- tions out of this state.	Surplus capital in banking institu- tions.	Money on hand, at interest, or on deposit.	Stock in trade.
Barrington	\$337,632	.....	\$1,400	.....	\$17.00	\$2,629	\$37,124
Dover	5,845,090	.....	84,102	\$100.00	.....	64,003	900,862
Durham	479,145	\$28,150	11,250	.....	.....	5,834	22,800
Farmington	880,645	300	13,790	.....	.....	34,974	75,426
Lee	209,270	.....	3,244	.....	.....	12,150	23,060
Madbury	158,100	.....	8,020	.....	.....	19,800	7,955
Middleton	79,962	.....	.....	.....	.....	.....	11,611
Milton	480,420	.....	1,540	.....	.....	17,750	22,100
New Durham	149,303	.....	.....	.....	.....	1,000	16,195
Rochester	2,893,592	1,000	61,102	.....	.....	25,418	437,590
Rollinsford	471,725	.....	37,222	.....	.....	29,550	63,600
Somersworth	1,048,671	.....	149,414	.....	.....	2,200	219,381
Strafford	344,314	.....	2,300	.....	.....	1,000	60,628
Total	\$13,977,869	\$29,450	\$373,384	\$100.00	\$17.00	\$216,308	\$1,898,332

STRAFFORD COUNTY.

TOWNS.	POLLS.		Aqueducts, locks and canals, toll bridges, wharves, ferries.	Mills, factories, and machinery.	Buildings not des- ignated.	Amount of inven- tory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Barrington	283	\$28,300	.....	\$10,800	.....	\$160,340	\$13,352.41	2.90
Dover,	3,239	323,900	.....	1,186,927	\$6,000	8,550,831	166,882.26	1.95
Durham	268	26,800	.....	3,150	.....	614,963	9,861.63	1.60
Farmington	716	71,600	.....	10,300	.....	1,129,507	27,823.38	2.46
Lee,	156	15,600	.....	3,750	.....	291,916	4,086.82	1.40
Madbury	87	8,700	.....	.....	.....	222,528	3,004.16	1.35
Middleton	79	7,900	.....	1,700	.....	109,876	2,252.45	2.05
Milton	416	41,600	.....	30,600	100	624,385	10,734.54	1.72
New Durham	180	18,000	.....	9,100	.....	212,576	4,883.50	2.30
Rochester	2,203	220,300	.....	319,300	.....	4,080,538	81,610.76	2.00
Rollinsford	419	41,900	.....	360,700	.....	1,030,601	16,555.96	1.60
Somersworth	1,653	165,300	.....	915,000	.....	3,136,694	67,438.92	2.15
Strafford	321	32,100	.....	8,315	.....	494,059	10,684.37	2.16
Total	10,020	\$1,002,000	.....	\$2,859,672	\$6,100	\$20,958,814	\$119,171.16	2.00

TABLE No. 1.—Continued.
BELKNAP COUNTY.

Towns.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Alton	379	\$19,146	\$50.51	1	.....	.....	53	\$2,605	\$49.15	501	\$12,748	\$25.41
Barnstead	360	20,970	58.25	.....	\$25.00	\$25.00	37	2,325	62.83	570	15,676	27.49
Belmont	352	15,696	44.59	.....	.....	.....	30	1,138	37.12	561	11,836	21.09
Center Harbor	162	6,106	37.69	.....	.....	.....	37	1,752	47.35	246	5,194	21.11
Gilford	218	11,702	53.67	.....	.....	.....	66	3,162	47.90	411	10,798	26.27
Gilmanton	431	22,320	51.78	.....	.....	.....	60	3,364	56.06	759	19,086	25.14
Laconia	694	38,210	55.05	.....	.....	.....	26	1,470	56.53	429	9,940	23.17
Meredith	340	17,717	52.10	.....	.....	.....	62	2,950	47.58	556	11,976	21.51
New Hampton	289	11,975	41.43	.....	.....	.....	36	1,935	53.75	536	11,565	21.57
Sanbornton	350	17,802	50.86	.....	.....	.....	56	2,862	51.10	682	15,352	22.51
Tilton	307	16,675	54.31	.....	.....	.....	4	145	36.25	365	8,277	22.67
Total	3,882	\$198,319	\$51.08	1	\$25.00	\$25.00	467	\$23,705	\$50.76	5,616	\$132,418	\$23.58

BELKNAP COUNTY.

Towns.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Alton	308	\$5,139	\$16.68	290	\$901	\$3.10	..	..	..	85	\$43	19	\$1,050
Barnstead	404	7,997	19.79	210	726	3.45	..	..	..	..	..	..	600
Belmont	228	3,030	13.28	121	310	2.56	..	..	..	..	..	..	550
Center Harbor	120	1,996	16.63	63	188	2.98	7	\$50	\$7.14	..	..	..	2,096
Gilford	408	7,882	19.31	429	1,402	3.26	4	96	13.71	..	..	..	..
Gilmanton	510	10,722	21.02	417	1,310	3.14	5	62	15.50	160	66	..	..
Laconia	119	2,268	19.05	37	196	5.29	25	60	12.00	60	30	2	100
Meredith	319	5,692	17.84	299	888	2.97	5	240	9.60	380	154	129	8,932
New Hampton	229	4,283	18.70	181	487	2.69	..	52	10.40	..	..	77	2,280
Saubornon	305	5,544	18.17	778	2,412	3.10	2	24	12.00	1,055	332	..	275
Tilton	92	1,590	17.28	216	660	3.05	2	10	5.00	500	250	13	404
Total	3,042	\$56,143	\$18.45	3,041	\$9,480	\$3.11	57	\$594	\$10.42	2,240	\$875	240	\$21,287

TABLE No. 1.—Continued.

BELKNAP COUNTY.

Towns.	Improved and un- improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corpora- tions out of this state.	Surplus capital in banking institu- tions.	Money on hand, at interest, or on deposit.	Stock in trade.
Alton	\$497,257	\$1,000	\$1,700	.....	.....	\$500	\$19,663
Barnstead	340,096	.....	13,300	.....	.....	7,740	31,890
Belmont	381,533	600	5,000	.....	.....	11,681	31,721
Center Harbor	195,224	.....	500	.....	.....	9,500	11,200
Gilford	325,808	.....	2,992	.....	.....	2,450	8,390
Gilmanton	351,178	.....	4,800	.....	.....	3,524	28,038
Laconia	3,382,134	5,000	102,226	.....	.....	99,484	256,690
Meredith	527,751	.....	2,800	.....	.....	8,526	42,090
New Hampton	220,231	.....	600	\$1,652	.....	1,900	8,350
Sauborneton	275,390	.....	500	.....	.....	5,300	10,430
Tilton	659,790	2,200	42,375	.....	.....	30,500	69,600
Total.....	\$7,159,392	\$8,800	\$176,793	\$1,652	.....	\$181,108	\$518,062

BELKNAP COUNTY.

Towns.	POLLS.		Aqueducts, locks and canals, toll bridges, wharves, ferries.	Mills, factories and machinery	Buildings not designated.	Amount of inventory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Alton.....	351	\$35,100	\$12,000	\$7,100	\$1,280	\$617,232	\$13,887.27	\$2.25
Barnstead.....	298	29,800	.....	7,215	.....	478,360	9,280.18	1.94
Belmont.....	339	33,900	.....	30,100	350	527,498	10,866.46	2.06
Center Harbor.....	128	12,800	.....	.....	150	246,802	3,911.67	1.58
Gilford.....	220	22,000	.....	.....	.....	396,714	6,574.41	1.66
Gilmanton.....	321	32,100	.....	8,404	.....	488,036	8,980.00	1.84
Laconia.....	2,213	221,300	.....	295,700	18,702	4,442,646	96,702.78	2.18
Meredith.....	453	45,300	.....	7,358	.....	675,380	12,410.99	1.84
New Hampton.....	210	21,000	10,080	2,000	.....	296,665	6,905.80	2.33
Sanbornton.....	277	27,700	.....	2,500	.....	366,220	6,591.96	1.80
Tilton.....	473	47,300	12,000	64,550	450	961,372	19,905.71	2.07
Total.....	5,283	\$528,300	\$34,080	\$424,927	\$20,932	\$9,496,925	\$196,017.23	\$2.06

TABLE No. 1.—Continued.
CARROLL COUNTY.

TOWNS.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Albany.....	69	\$2,614	\$37.88	.....	.....	.....	7	\$204	\$29.14	56	\$880	\$15.71
Bartlett.....	218	8,948	41.04	.....	.....	.....	2	70	35.00	244	4,912	20.13
Brookfield.....	84	3,950	47.02	.....	.....	.....	48	2,732	56.91	193	4,986	25.83
Chatham.....	99	4,135	41.76	.....	.....	.....	42	1,790	42.61	177	3,229	18.24
Conway.....	628	32,610	51.92	.....	.....	.....	42	2,224	52.95	618	13,244	21.43
Eaton.....	103	4,924	47.80	.....	.....	.....	78	3,910	50.12	168	3,610	21.48
Efingham.....	200	10,667	53.33	1	\$15	\$15.00	39	1,695	43.46	236	4,998	21.17
Freedom.....	202	9,910	49.05	.....	.....	.....	93	5,490	59.03	267	6,439	24.11
Hart's Location.....	4	225	56.25	.....	.....	.....	.....	.....	.....	5	100	20.00
Jackson.....	204	8,652	42.41	.....	.....	.....	46	2,126	46.21	260	5,388	20.72
Madison.....	164	6,574	40.08	.....	.....	.....	32	1,132	35.37	144	2,868	19.91
Moultonborough.....	251	9,784	38.98	.....	.....	.....	66	2,507	37.98	375	6,915	18.44
Ossipee.....	408	20,708	50.75	2	50	25.00	67	3,686	55.01	441	9,610	21.79
Sandwich.....	381	14,564	38.22	1	20	20.00	180	10,118	56.21	534	13,104	24.53
Tamworth.....	314	16,172	51.50	1	12	12.00	58	3,192	55.03	338	8,320	24.61
Tuftonborough.....	182	7,170	39.39	.....	.....	.....	74	3,544	47.89	358	7,912	22.10
Wakefield.....	299	15,607	52.19	.....	.....	.....	98	5,253	53.62	355	7,987	22.50
Wolfeborough.....	449	21,592	48.08	2	60	30.00	103	5,190	50.38	628	13,633	21.70
Total.....	4,259	\$198,806	\$46.67	7	\$157	\$22.42	975	\$54,863	\$56.26	5,397	\$118,135	\$21.88

CARROLL COUNTY.

Towns.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Albany.....	25	\$382	\$15.28	5	\$10	\$2.00	..	..	..	..	..	..	..
Bartlett.....	44	558	12.68	124	344	2.78	..	..	..	..	..	..	\$750
Brookfield.....	94	2,498	26.57	54	190	3.51	..	..	..	..	..	..	100
Chatham.....	77	1,312	17.03	171	445	2.60	18	\$100	\$5.50	..	..	..	..
Conway.....	231	3,905	16.90	40	80	2.00	9	110	12.22	..	..	57	4,100
Eaton.....	76	1,560	20.52	131	404	3.08	..	..	..	..	..	..	..
Effingham.....	96	1,856	19.33	29	84	2.90	4	76	19.00	..	..	..	..
Freedom.....	180	5,091	28.28	265	764	2.88	..	..	..	..	..	..	150
Hart's Location.....	..	..	..	..	..	..	..	..	..	..	..	..	..
Jackson.....	108	1,972	18.25	420	918	2.18	8	76	9.50	..	..	40	3,340
Madison.....	67	1,062	15.85	73	140	1.91	..	..	..	..	..	..	..
Moultonborough.....	166	3,869	23.30	195	396	2.03	5	40	8.00	..	..	20	1,300
Ossipee.....	214	4,136	19.32	140	424	3.02	5	40	8.00	..	..	3	300
Sandwich.....	391	9,210	23.55	418	1,358	3.21	1	10	10.00	..	..	31	618
Tamworth.....	186	3,824	20.55	209	548	2.62	..	..	..	..	..	91	3,884
Tauntonborough.....	278	6,002	21.59	98	282	2.87	..	..	..	..	..	..	..
Wakefield.....	136	2,878	21.16	163	489	3.00	..	..	..	..	..	34	1,450
Wolfeborough.....	220	4,776	21.70	209	540	2.58	4	40	10.00	..	..	56	1,950
Total.....	2,589	\$34,891	\$21.20	2,744	7,416	\$2.70	54	\$492	\$9.11	..	..	332	\$17,942

CARROLL COUNTY.

VALUATION AND TAXATION.

37

Towns.	ROLLS.		Aqueducts, locks and canals, toll ferries.	Mills, factories, and machinery.	Buildings not designated.	Amount of inventory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Albany	66	\$6,600	\$1,000	\$4,300	.....	\$74,612	\$2,002.97	2.68
Bartlett.....	270	27,000	1,100	37,000	.....	380,752	7,243.38	1.90
Brookfield.....	68	6,800	2,000	.....	.....	118,122	1,748.21	1.48
Chatham.....	79	7,900	.....	1,475	.....	92,834	2,088.26	2.25
Coway	757	75,700	26,000	30,900	.....	959,380	17,288.76	1.80
Eaton.....	111	11,100	.....	1,400	.....	126,920	2,703.97	2.13
Efingham.....	168	16,800	3,500	6,850	.....	228,131	3,680.25	1.62
Freedom	174	17,400	.....	1,400	.....	236,334	4,183.38	1.77
Hart's Location	8	800	.....	.....	.....	15,625	150.00	.96
Jackson	161	16,100	.....	.....	.....	285,204	4,948.28	1.73
Madison.....	144	14,400	.....	5,450	.....	172,982	3,894.09	2.25
Moultonborough.....	265	26,500	.....	.....	\$3,760	344,906	4,690.72	1.36
Ossipee	405	40,500	800	14,100	.....	509,872	9,177.70	1.80
Sandwich	311	31,100	.....	3,024	.....	436,976	9,591.45	2.20
Tamworth	256	25,600	.....	3,800	250	418,620	7,953.78	1.90
Tuftonborough	174	17,400	.....	850	.....	257,478	5,149.56	2.00
Wakefield	446	44,600	.....	14,855	.....	624,586	11,867.13	1.90
Wolfeborough	607	60,700	.....	14,250	.....	1,088,413	28,427.24	2.61
Total	4,470	\$447,000	\$34,400	\$139,654	\$4,010	\$6,371,747	\$126,798.13	1.99

TABLE No. 1.—Continued.
MERRIMACK COUNTY.

Towns.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Allenstown.....	97	\$6,661	\$68.67	.....	.....	.....	.....	.....	.....	154	\$4,550	\$29.54
Andover.....	287	14,232	49.58	.....	.....	.....	42	\$2,500	\$59.52	476	10,999	23.10
Boscawen.....	268	11,171	41.68	.....	.....	.....	16	960	60.00	307	6,742	21.96
Bow.....	204	10,146	49.73	.....	.....	.....	16	870	54.37	447	10,998	24.60
Bradford.....	260	13,863	53.31	.....	.....	.....	43	2,411	56.07	482	13,588	28.19
Canterbury.....	271	13,535	49.94	.....	.....	.....	49	3,010	61.42	599	13,006	21.71
Chichester.....	236	11,477	48.63	.....	.....	.....	10	775	77.50	483	11,679	24.18
Concord.....	1,589	81,765	51.45	.....	.....	.....	31	1,705	55.00	1,380	28,100	20.36
Danbury.....	232	8,648	37.27	.....	.....	.....	60	2,904	48.40	512	11,384	22.23
Dunbarton.....	235	11,610	49.40	.....	.....	.....	9	615	68.33	572	14,128	24.69
Epsom.....	248	13,694	55.21	.....	.....	.....	32	2,014	62.93	687	18,095	26.33
Franklin.....	618	34,444	55.73	.....	.....	.....	8	426	53.25	534	14,807	27.72
Henniker.....	349	18,135	51.96	8	\$500	\$62.50	45	2,345	52.11	839	19,607	23.36
Hill.....	145	5,600	38.62	.....	.....	.....	8	356	44.50	259	5,455	21.06
Hooksett.....	310	18,145	58.53	.....	.....	.....	5	190	38.00	432	10,665	24.68
Hopkinton.....	464	27,087	58.37	.....	.....	.....	52	3,659	58.82	919	22,668	24.66

London	354	15,725	40.95	.....	.....	.....	60	3,350	55.83	847	18,669	22.04
Newbury	174	8,231	47.32	.....	.....	.....	32	1,915	59.84	259	6,568	25.35
New London	314	19,074	60.74	.....	.....	.....	67	3,335	49.77	490	12,859	26.22
Northfield	261	14,927	56.54	2	80	40.00	4	184	46.00	361	7,287	20.01
Pembroke	325	16,530	50.86	3	160	53.33	8	500	62.50	561	11,662	26.13
Pittsfield	469	29,315	62.50	2	150	75.00	18	1,120	62.22	691	15,825	22.80
Salisbury	204	10,276	50.37	.....	.....	.....	38	2,206	58.05	346	8,488	24.53
Sutton	257	14,291	55.60	.....	.....	.....	51	2,982	55.22	439	10,282	23.42
Warner	356	21,177	59.48	.....	.....	.....	60	3,388	56.46	577	15,058	26.09
Webster	187	9,669	51.70	.....	.....	.....	32	1,825	57.03	346	8,781	25.37
Wilhoit	200	9,010	45.20	.....	.....	.....	18	1,100	61.11	379	9,374	24.73
Total	8,947	\$168,471	\$52.36	15	\$890	\$59.33	817	\$16,045	\$56.35	14,384	\$344,324	\$23.93

TABLE No. 1.—Continued.
MERRIMACK COUNTY.

TOWNS.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Allenstown.....	20	\$430	\$21.50	41	\$118	\$2.87	5	\$71	\$14.20	250	\$81	9	\$500
Andover.....	235	4,178	17.77	410	1,233	3.00	5	80	20.00	50	20	.....	1,750
Boscawen.....	64	775	12.10	167	362	2.16	4	.....	.....	435	217	2	1,150
Bow.....	94	1,338	14.23	31	61	2.19	.....	.....	.....	.....	.....	.....	100
Bradford.....	357	6,845	19.17	218	739	3.38	10	160	16.00	.....	.....	6	280
Canterbury.....	362	7,249	20.02	401	1,230	3.00	.....	.....	.....	.....	.....	.....	400
Chichester.....	222	5,362	24.15	189	590	3.12	.....	.....	.....	.....	.....	.....	26,370
Concord.....	193	2,560	13.26	192	440	2.29	35	340	9.71	100	26	.....	.....
Danbury.....	271	5,124	18.90	404	1,251	3.10	2	35	17.50	.....	60	.....	325
Dunbarton.....	177	2,987	16.87	59	168	2.81	.....	.....	.....	.....	.....	.....	.....
Epsom.....	137	2,855	20.83	149	521	3.57	.....	.....	.....	.....	.....	.....	.....
Franklin.....	66	895	13.56	169	451	2.68	.....	.....	.....	.....	.....	102	7,810
Henniker.....	357	6,282	17.59	155	531	3.44	9	85	9.44	190	76	11	425
Hill.....	98	1,426	14.55	299	655	2.19	3	18	6.00	.....	.....	5	100
Hooksett.....	72	1,223	16.98	21	81	4.00	.....	.....	.....	.....	.....	12	950
Hopkinton.....	375	6,333	16.88	580	1,272	2.19	16	171	10.66	272	136	75	3,441

London.	449	8,365	18,63	332	810	2,44	2	22	11,00	.....	.....	.....	19	785
Newbury	144	3,294	22,87	234	603	2,57	.....	.....	.....	.....	250	87	3	350
New London	260	5,159	19,84	365	1,210	3,31	.....	.....	.....	.....	.....	.....	59	3,060
Northfield	142	1,622	11,41	280	724	2,58	7	50	7,14	250	175	.....	4	750
Pembroke	145	2,458	16,95	56	210	3,75	8	70	8,75	.....	.....	.....	73	3,610
Pittsfield	157	2,560	16,30	141	680	4,82	5	50	10,00	75	50	.....	83	3,365
Salisbury	221	4,602	20,82	574	1,588	2,76	.....	.....	.....	630	210	.....	1	76
Sutton	375	7,326	19,53	474	1,227	2,58	4	40	10,00	.....	.....	.....	8	500
Warner	354	6,852	19,35	372	1,208	3,24	9	130	14,44	.....	.....	.....	13	1,330
Webster	136	2,469	18,92	313	941	3,00	.....	.....	.....	925	85	.....	.....	450
Wilmot	257	5,678	22,09	400	1,100	2,75	1	12	12,00	.....	.....	.....	.....	100
Total.....	5,734	\$106,247	\$18,52	7,026	\$20,022	\$2,84	120	\$1,334	\$11,11	2,727	\$1,223	762		\$57,977

TABLE No. 1.—Continued.

MERRIMACK COUNTY.

Towns.	Improved and un-improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital in banking institutions.	Money on hand, at interest, or on deposit.	Stock in trade.
Allenstown.	\$320,346	..	..	..	..	\$3,000	\$44,841
Andover.	295,996	..	\$16,300	..	..	10,600	45,700
Boscawen.	439,595	\$2,500	500	\$600	..	1,960	75,350
Bow.	206,719	..	4,600	..	..	12,916	4,740
Bradford.	307,804	..	3,300	1,000	..	20,300	28,270
Canterbury.	351,010	..	2,885	..	..	4,300	42,395
Chichester.	177,515	..	20,734	..	..	36,755	2,910
Concord.	9,528,786	17,260	213,791	30,700	..	151,586	712,515
Danbury.	149,156	..	1,500	..	..	5,666	11,076
Dunbarton.	228,840	..	1,311	..	\$168	10,986	9,281
Epsom.	249,448	..	2,900	..	..	..	16,350
Franklin.	1,610,606	..	32,074	..	..	30,715	234,060
Henniker.	522,207	4,000	2,500	..	..	13,675	27,975
Hill.	143,970	..	1,000	..	200	1,300	8,350
Hooksett.	488,301	..	5,106	..	..	200	18,975
Hopkinton.	646,654	1,162	7,292	11,650	..	63,951	57,041

London	375,563	.....	5,400	.....	.....	13,169	13,705
Newbury	242,095	.....	2,900	.....	.....	11,960	6,300
New London	319,800	.....	1,300	.....	.....	18,285	11,405
Northfield	439,480	.....	3,200	.....	.....	3,800	45,137
Pembroke	751,980	9,500	9,942	.....	.....	20,250	69,400
Pittsfield	835,025	200	20,100	.....	5,125	11,100	71,155
Salisbury	193,455	.....	.....	.....	400	8,510	3,900
Sutton	250,178	.....	1,200	.....	250	12,780	14,740
Warner	486,445	100	11,130	.....	1,300	22,114	37,700
Webster	197,255	.....	500	.....	100	11,676	10,080
Wilmot	144,580	.....	9,064	.....	2,000	5,100	7,400
Total	19,903,709	\$34,722	\$380,529	\$47,600	\$12,070	\$506,654	\$1,630,951

TABLE No. 1.—*Continued.*

MERRIMACK COUNTY.

TOWNS.	POLLS.		Aqueducts, locks and canals, toll bridges, wharves, ferries.	Mills, factories, and machinery.	Buildings not des- ignated.	Amount of inven- tory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Allentown.....	324	\$32,400	.....	\$240,000	\$425	\$653,271	\$8,492.53	1.30
Andover.....	327	32,700	\$400	18,975	.....	456,315	7,210.90	1.58
Boscawen.....	311	31,100	53,000	26,300	.....	651,765	12,775.00	1.96
Bow.....	202	20,200	.....	37,172	.....	310,080	4,465.15	1.44
Bradford.....	261	26,100	.....	6,156	.....	430,810	5,097.39	1.18
Canterbury.....	202	20,200	.....	4,400	.....	463,220	6,716.69	1.45
Chichester.....	171	17,100	.....	1,100	800	287,197	5,169.55	1.80
Concord.....	5,249	524,900	.....	73,400	.....	11,394,218	241,216.83	2.12
Danbury.....	177	17,700	.....	2,300	.....	216,906	3,534.47	1.63
Dunbarton.....	139	13,900	.....	.....	.....	294,246	4,050.71	1.38
Epsom.....	224	22,400	.....	6,300	.....	334,580	5,520.57	1.65
Franklin.....	1,317	131,700	.....	597,400	.....	2,695,891	49,873.98	1.85
Henniker.....	354	35,400	6,300	51,000	.....	710,516	13,500.60	1.90
Hill.....	161	16,100	.....	5,150	250	189,930	3,323.78	1.75
Hooksett.....	385	38,500	.....	118,240	.....	700,579	11,630.75	1.66
Hopkinton.....	430	43,000	.....	17,800	.....	912,717	14,674.81	1.61

London.....	286	28,600	.....	5,725	.....	489,888	7,103.37	1.45
Newbury.....	117	11,700	.....	2,100	.....	299,006	4,309.02	1.47
New London.....	205	20,500	.....	.....	.....	415,987	6,864.07	1.65
Northfield.....	316	31,600	30,000	40,300	.....	619,316	11,623.07	1.88
Pembroke.....	716	71,600	.....	224,300	1,700	1,196,872	18,551.52	1.55
Pittsfield.....	574	57,400	30,000	62,500	.....	1,145,720	25,177.22	2.20
Salisbury.....	181	18,100	.....	4,174	.....	255,985	4,786.83	1.87
Sutton.....	234	23,400	.....	2,700	.....	341,896	5,947.17	1.74
Warner.....	329	32,900	.....	15,180	175	662,364	14,237.08	2.15
Webster.....	142	14,200	.....	3,100	.....	261,131	3,786.49	1.45
Wilnot.....	177	17,700	.....	2,200	.....	214,448	4,020.90	1.87
Total.....	13,511	\$1,351,100	\$119,700	\$1,567,966	\$3,350	\$26,604,884	\$503,660.45	1.89

TABLE No. 1.—Continued.
HILLSBOROUGH COUNTY.

TOWNS.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Amherst.....	298	\$20,086	\$67.40	3	\$100	\$33.33	6	\$306	\$51.00	740	\$19,889	\$26.88
Antrim.....	332	14,850	44.72	...	...	...	12	720	60.00	535	14,332	26.78
Bedford.....	435	26,500	60.91	...	...	...	6	315	52.50	1,060	29,666	27.98
Bennington.....	114	5,960	52.28	...	...	...	7	360	51.42	153	3,771	24.61
Brookline.....	128	5,900	46.09	...	...	...	2	100	50.00	74	1,920	25.94
Deering.....	179	8,185	45.72	...	...	...	28	1,759	62.82	490	11,856	24.18
Francesstown.....	222	13,484	60.73	...	...	...	8	586	73.25	497	12,831	25.81
Goffstown.....	490	29,826	60.86	...	...	...	20	1,230	61.50	690	28,100	40.78
Greenfield.....	145	9,695	66.86	...	...	...	23	1,230	53.47	446	12,909	28.94
Greenville.....	128	8,550	66.79	...	...	...	2	80	40.00	184	6,409	34.83
Hancock.....	231	12,475	54.00	...	...	...	22	1,065	48.40	615	15,272	24.83
Hillsborough.....	506	31,120	61.50	1	10	10.00	42	2,608	62.09	833	19,686	23.63
Hollis.....	338	17,150	50.73	...	...	...	2	150	75.00	823	21,005	25.52
Hudson.....	277	17,314	62.50	...	...	...	4	260	65.00	629	18,563	29.51
Litchfield.....	117	5,980	51.11	...	...	...	2	80	40.00	229	5,844	25.51
Lyndeborough.....	190	9,840	51.79	...	...	...	12	776	64.66	606	14,894	24.57

Manchester	2,621	180,157	68.73	...	...	...	...	...	...	...	...	496	12,931	26.07
Mason	121	6,810	56.28	...	...	...	...	...	...	...	...	257	6,779	26.37
Merrimack	227	13,185	58.08	2	75	37.50	2	100	50.00	...	...	475	11,758	24.75
Milford	529	32,420	61.28	...	...	...	...	...	...	...	...	740	22,360	30.21
Mont Vernon	138	8,346	60.47	...	...	...	...	...	...	...	...	326	8,932	27.46
Nashua	1,113	83,025	74.59	2	30	15.00	3	163	54.33	...	...	420	17,309	41.21
New Boston	337	19,995	59.33	...	...	...	26	1,555	59.80	...	...	1,057	29,250	27.67
New Ipswich	233	12,480	53.56	...	...	...	10	460	46.00	...	...	350	9,931	28.37
Pelham	328	15,842	48.29	...	...	...	...	...	...	...	...	899	22,644	25.18
Peterborough	492	32,377	65.80	...	...	...	4	310	77.50	...	...	465	13,693	29.44
Sharon	47	2,545	54.14	...	...	...	...	...	...	...	...	42	1,092	26.00
Temple	144	7,663	53.21	...	...	...	10	588	58.80	...	...	373	8,996	24.11
Weare	480	24,047	50.09	...	...	...	49	2,450	50.00	...	...	981	22,738	23.17
Wilton	332	17,170	51.41	1	20	20.00	2	110	55.00	...	...	640	16,950	26.48
Windsor	7	270	38.57	...	...	...	...	...	...	...	...	14	368	26.28
Total	11,279	\$693,247	\$61.46	9	\$235	\$26.11	306	\$17,486	\$57.14	16,139	\$142,701			\$27.43

TABLE No. 1.—Continued.

HILLSBOROUGH COUNTY.

TOWNS.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Amherst	173	\$3,395	\$19.62	10	\$50	\$5.00	...	...	...	842	\$424	...	\$3,993
Antrim	216	4,297	19.89	198	610	3.08	7	\$85	\$12.14	675	275	...	1,510
Bedford	169	3,188	18.86	13	33	2.53	10	110	11.00	...	250	...	1,500
Bennington	33	547	16.57	34	102	3.00	...	...	...	1,523	609	11	925
Brookline	25	436	17.44	...	...	...	...	...	...	...	...	...	450
Deering	278	5,553	19.97	122	352	2.88	...	...	...	...	...	...	900
Francesstown	142	2,526	17.78	85	223	2.62	...	...	...	...	30	...	450
Goffstown	203	3,790	18.67	36	178	4.94	51	598	11.72	810	404	28	1,560
Greenfield	180	3,382	18.79	76	284	3.73	3	30	10.00	958	335	...	...
Greenville	23	396	17.21	...	...	...	1	10	10.00	60	30	96	3,350
Hancock	272	4,587	16.86	161	465	2.88	5	50	10.00	8,210	3,301	...	...
Hillsborough	370	7,168	19.37	126	294	2.33	1	10	10.00	...	...	...	1,260
Hollis	190	3,130	16.47	43	190	4.41	...	...	...	1,090	545	...	1,785
Hudson	173	3,342	19.31	15	50	3.33	14	160	11.42	1,055	524	26	1,556
Litchfield	29	503	17.34	...	...	...	...	...	...	650	300	1	125
Lyndeborough	184	3,132	17.02	118	394	3.33	2	20	10.00	2,270	800	...	...

Manchester.....	23	483	21.00	8	24	3.00	...	...	...	...	...	1,400	.....	120,369
Mason.....	46	916	19.91	36	144	4.00	1	20	20.00	575	287	.....	.....	1,075
Merrimack.....	102	1,741	17.06	8	24	3.00	6	60	10.00	797	1,594	.....	.....	630
Milford.....	108	1,887	17.47	6	18	3.00	...	...	...	7,879	3,931	109	.....	2,885
Mont Vernon.....	87	1,512	17.38	2	6	3.00	4	36	9.00	...	...	.....	.....	1,350
Nashua.....	30	1,020	34.00	20	40	2.00	2	10	5.00	...	420	.....	.....	49,835
New Boston.....	518	5,157	9.95	92	249	2.70	133	1,815	13.64	1,084	535	41	.....	1,618
New Ipswich.....	56	920	16.43	3	14	4.66	...	...	...	1,410	564	.....	.....	1,782
Pelham	191	2,911	15.24	6	30	5.00	9	99	11.00	1,139	570	.....	.....	2,325
Peterborough.....	270	6,037	22.36	80	254	3.17	...	...	...	...	167	.....	.....	6,295
Sharon.....	18	299	16.61	38	151	3.97	...	...	...	...	...	.....	.....	...
Temple.....	103	1,804	17.51	30	122	4.06	3	36	12.00	1,075	530	.....	.....	495
Weare.....	472	8,244	17.46	343	912	2.65	6	54	9.00	419	250	.....	.....	200
Wilton.....	209	3,625	17.34	182	555	3.01	10	100	10.00	1,150	460	36	.....	2,300
Windsor.....	18	278	15.44	...	...	...	...	...	...	...	...	.....	.....	...
Total.....	4,911	\$86,206	\$17.55	1,891	\$5,768	\$3.05	268	\$3,303	\$12.32	33,701	\$18,535	348	.....	\$210,553

TABLE No. 1.—Continued.

HILLSBOROUGH COUNTY.

TOWNS.	Improved and un- improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corpora- tions out of this state.	Surplus capital in banking institu- tions.	Money on hand, at interest, or on deposit.	Stock in trade.
Amherst.....	\$502,466	.....	\$6,700	.....	.....	\$19,546	\$38,370
Antrim.....	446,539	.....	7,865	\$345	.....	28,939	64,300
Bedford.....	487,495	.....	900	.....	\$150	37,992	14,470
Bennington.....	151,865	.....	1,200	.....	.....	200	27,556
Brookline.....	198,059	.....	600	.....	.....	3,245	16,790
Deering.....	151,174	.....	2,000	.....	.....	1,446	8,777
Francetown.....	231,161	.....	1,200	.....	.....	18,305	26,830
Goffstown.....	932,456	\$14,000	19,200	.....	.....	42,430	45,950
Greenfield.....	190,509	.....	600	.....	.....	2,200	19,130
Greenville.....	295,356	.....	.....	.....	.....	3,500	78,300
Hancock.....	249,795	.....	11,790	.....	.....	5,576	23,000
Hillsborough.....	857,102	.....	39,400	.....	.....	.....	112,494
Hollis.....	427,730	.....	14,125	1,000	.....	12,010	20,245
Hudson.....	575,938	.....	7,900	.....	.....	2,828	28,770
Litchfield.....	143,810	.....	16,760	300	.....	6,984	26,200
Lyndeborough.....	218,962	.....	5,900	.....	.....	3,550	15,860

Manchester.....	19,703,327	.....	227,982	.....	.....	1,173,222	3,536,583
Mason.....	175,327	.....	50	.....	.....	10,996	14,278
Merrimack.....	438,845	.....	8,400	.....	.....	3,500	39,300
Milford.....	1,523,855	.....	67,920	.....	.....	57,153	121,154
Mont Vernon.....	265,366	.....	1,000	.....	.....	11,800	2,300
Nashua.....	8,950,594	25,000	171,040	9,462	.....	127,228	1,000,275
New Boston.....	434,306	.....	1,537	1,000	.....	36,735	35,911
New Ipswich.....	350,985	.....	.....	.....	.....	600	12,050
Pelham.....	364,556	.....	2,500	.....	.....	14,700	15,828
Peterborough.....	955,146	8,000	48,377	.....	.....	104,291	97,452
Sharon.....	56,310	.....	.....	.....	.....	.....	6,850
Temple.....	134,840	8,000	700	.....	.....	5,348	13,100
Weare.....	501,801	.....	2,500	.....	.....	15,609	78,070
Wilton.....	717,650	.....	11,950	60	.....	50,105	62,635
Windsor.....	24,288	.....	.....	.....	.....	.....	3,600
Total.....	\$40,657,613	\$55,000	\$680,096	\$12,167	\$150	\$1,800,038	\$5,606,428

TABLE No. 1.—Continued.

HILLSBOROUGH COUNTY.

TOWNS.	POLLS.		Aqueducts, locks and canals, toll bridges, wharves, ferries.	Mills, factories, and machinery.	Buildings not designated.	Amount of inventory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Amherst.....	265	\$26,500	.....	\$8,050	.....	\$640,875	\$11,525.39	1.77
Antrim.....	371	37,100	.....	41,700	.....	663,467	14,288.77	2.15
Bedford.....	295	29,500	.....	3,300	.....	635,369	10,229.44	1.61
Bennington.....	153	15,300	.....	42,000	.....	253,786	5,075.72	2.00
Brookline.....	164	16,400	\$4,000	11,970	.....	281,479	5,207.83	1.85
Deering.....	122	12,200	.....	400	\$25,000	204,602	3,525.77	1.72
Francesstown.....	168	16,800	.....	4,700	.....	329,126	6,468.00	1.96
Goffstown.....	569	56,900	.....	40,300	.....	1,216,922	18,699.87	1.53
Greenfield.....	151	15,100	.....	3,100	.....	258,504	4,525.19	1.75
Greenville.....	342	34,200	.....	297,830	.....	638,011	9,570.16	1.50
Hancock.....	193	19,300	.....	3,100	.....	349,776	5,071.17	1.45
Hillsborough.....	673	67,300	.....	68,100	.....	1,206,552	26,611.76	2.20
Hollis.....	258	25,800	.....	10,595	.....	555,460	8,331.90	1.50
Hudson.....	328	32,800	.....	8,900	.....	698,905	12,428.00	1.78
Litchfield.....	72	7,200	.....	.....	.....	214,086	2,461.99	1.15
Lyndeborough.....	175	17,500	.....	1,900	.....	293,528	4,843.20	1.65

Manchester.	14,079	1,407,900	280,000	6,399,956	.....	33,044,334	743,505.53	2.25
Mason.	108	10,800	.....	1,800	.....	229,382	3,211.33	1.40
Merrimack.	312	31,200	.....	107,100	.....	657,537	9,863.05	1.50
Milford.	908	90,800	.....	111,100	.....	2,035,483	38,674.93	1.90
Mont Vernon.	122	12,200	.....	2,626	.....	315,494	5,237.08	1.66
Nashua.	6,356	635,600	.....	3,144,800	.....	14,215,851	307,002.76	2.16
New Boston.	285	28,500	.....	8,400	.....	606,593	9,833.95	1.62
New Ipswich.	209	20,900	.....	100,326	.....	511,015	8,176.24	1.60
Pelham.	222	22,200	.....	7,700	1,425	473,330	7,336.62	1.55
Peterborough.	632	63,200	.....	122,275	.....	1,457,874	24,054.92	1.65
Sharon.	34	3,400	.....	1,900	.....	72,547	1,230.95	1.70
Temple.	83	8,300	.....	3,000	.....	193,522	2,902.87	1.50
Weare.	424	42,400	.....	9,050	.....	708,325	13,033.17	1.84
Wilton.	393	39,300	.....	39,850	.....	962,840	17,331.12	1.80
Windsor.	6	600	.....	.....	.....	29,404	349.95	1.19
Total.	28,472	\$2,847,200	\$284,000	\$10,515,828	\$26,425	\$63,962,979	\$1,340,668.63	2.10

TABLE No. 1.—Continued.

CHESHIRE COUNTY.

TOWNS.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Alstead.....	315	\$19,480	\$61.84	.....	.....	.....	28	\$1,740	\$62.14	449	\$13,215	\$29.43
Chesterfield.....	395	22,716	57.50	.....	.....	.....	14	760	54.28	674	18,180	26.97
Dublin.....	205	13,753	67.08	.....	.....	.....	22	1,605	72.95	264	8,833	33.45
Fitzwilliam.....	289	18,485	63.96	.....	.....	.....	8	660	82.50	326	9,193	28.20
Gilsum.....	131	5,205	39.73	3	\$70	\$23.33	18	939	52.16	150	3,444	22.96
Harrisville.....	178	11,670	65.56	.....	.....	.....	6	485	80.83	199	5,009	25.17
Hinsdale.....	348	22,150	63.33	.....	.....	.....	10	660	66.00	537	14,180	26.40
Jaffrey.....	362	21,796	60.19	.....	.....	.....	16	1,014	63.37	511	13,534	26.48
Keene.....	997	75,104	75.63	.....	.....	.....	6	354	59.00	952	26,481	27.81
Marlborough.....	264	15,138	57.34	5	36	18.00	8	390	48.75	339	9,662	28.50
Marlow.....	183	9,990	54.59	.....	.....	.....	40	2,320	58.00	246	6,308	25.64
Nelson.....	90	5,044	56.04	2	100	50.00	10	564	56.40	112	3,052	27.25
Richmond.....	163	9,065	55.61	4	285	71.25	6	410	68.33	205	5,428	26.47
Rindge.....	296	19,785	66.84	.....	.....	.....	8	465	58.12	346	9,422	27.23
Roxbury.....	49	2,770	56.53	.....	.....	.....	2	150	75.00	41	1,090	26.58
Stoddard.....	162	9,022	55.69	.....	.....	.....	24	1,358	56.58	165	4,112	24.92

Sullivan	127	7,550	59.44	2	100	50.00	6	485	80.83	274	7,835	28.59
Surry	157	10,738	67.53	...	...	...	10	750	75.00	218	5,624	25.79
Swansey	375	19,570	52.18	...	...	...	6	450	75.00	592	12,900	21.79
Troy	177	10,623	60.01	...	...	...	12	720	60.00	205	5,865	28.60
Walpole	619	39,214	63.35	...	...	...	38	2,556	59.36	1,219	37,020	29.63
Westmoreland	312	20,375	65.30	...	...	...	16	1,015	63.43	874	26,650	30.49
Winchester	459	26,190	57.06	4	300	75.00	40	2,905	72.62	947	25,445	26.86
Total	6,653	\$115,733	\$62.48	17	\$891	\$52.41	354	\$22,455	\$63.43	9,875	\$272,482	\$27.59

TABLE No. 1.—Continued.
CHESHIRE COUNTY.

TOWNS.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Alstead	195	\$14,455	\$22.81	460	\$1,239	\$2.69	9	\$127	\$14.11	26	\$2,375	10	\$100
Chesterfield	348	7,516	21.59	285	932	3.27	10	155	15.50	1	7,890	1	1,415
Dublin	95	2,284	24.04	41	122	2.97	1	10	10.00	1,140	1,100	27	925
Fitzwilliam	67	1,410	21.04	33	125	3.78	1	10	10.00	200	100	3	136
Gilsun	109	1,925	17.66	73	224	3.06	1	10	10.00	30	14	1,800	5,925
Harrisville	80	1,685	21.06	140	362	2.58	1	10	10.00	60	30	240	5,925
Ipsdale	100	1,701	17.01	56	254	4.53	1	10	10.00	40	40	400	400
Jaffrey	129	2,514	19.48	94	336	3.57	1	10	10.00	16	16.00	1	16.00
Keene	222	3,790	17.07	93	236	2.53	18	320	17.77	16	8.00	2	2.90
Marlborough	105	2,018	19.21	81	241	2.90	2	16	8.00	128	64	3	136
Marlow	118	2,566	21.74	381	894	2.34	1	12	12.00	60	30	240	5,925
Nelson	43	882	20.51	157	412	2.62	1	12	12.00	40	40	400	400
Richmond	58	1,138	19.62	12	47	3.91	1	12	12.00	16	8.00	1	16.00
Rindge	92	1,576	17.13	80	320	4.00	8	70	8.75	16	16.00	1	16.00
Roxbury	22	376	17.09	61	274	4.49	1	16	16.00	1	16.00	1	16.00
Stoddard	52	836	16.07	119	296	2.48	1	16	16.00	1	16.00	1	16.00

TABLE No. 1.—Continued.

CHESHIRE COUNTY.

Towns.	Improved and un-improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital in banking institutions.	Money on hand, at interest, or on deposit.	Stock in trade.
Alstead.....	\$344,140	.....	\$5,800	.....	.....	\$33,881	\$18,700
Chesterfield	496,414	.....	800	.....	.....	20,074	10,055
Dublin	655,455	\$2,000	9,301	\$4,255	.....	75,236	12,950
Fitzwilliam.....	401,486	.....	3,000	.....	.....	15,972	19,150
Gilsum.....	159,389	.....	4,100	.....	\$70	21,945	10,125
Harrisville.....	227,305	.....	244	.....	.....	6,837	32,675
Hinsdale	711,454	.....	1,500	.....	.....	16,650	90,305
Jaffrey.....	598,136	2,000	54,840	.....	.....	55,692	86,020
Keene.....	4,738,297	92,100	531,600	.....	.....	380,082	489,396
Marlborough	479,236	3,500	29,255	1,960	.....	52,351	35,974
Marlow.....	145,368	1,000	21,132	.....	.....	27,501	6,480
Nelson.....	112,832	.....	112	500	.....	5,694	1,870
Richmond	244,515	.....	1,500	.....	.....	5,625	40,577
Rindge.....	422,314	.....	8,915	.....	.....	12,834	15,675
Roxbury	70,452	.....	.....	.....	.....	550	150
Stoddard.....	125,242	50	2,000	.....	.....	750	12,550

Sullivan	88,286	.....	3,200	.....	4,900	844
Surry	126,940	.....	200	.....	14,357	650
Swansey	555,445	.....	2,100	.....	24,835	31,250
Troy	404,525	.....	1,220	.....	18,233	31,725
Walpole	1,231,542	496	23,286	.....	33,892	85,130
Westmoreland	347,595	.....	2,397	.....	19,678	13,300
Winchester	831,205	4,000	39,594	.....	7,700	87,900
Total	\$13,487,603	\$105,146	\$746,096	\$6,715	\$855,272	\$1,136,451

TABLE No. 1.—Continued.

CHESHIRE COUNTY.

TOWNS.	POLLS.		Aqueducts, locks and canals, toll bridges, wharves, ferries.	Mills, factories, and machinery.	Buildings not designated.	Amount of inventory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Alstead	203	\$20,300	.....	\$14,950	.....	\$480,275	\$7,444.78	1.55
Chesterfield	272	27,200	.....	9,330	.....	614,204	10,229.54	1.66
Dublin	136	13,600	.....	1,150	.....	809,045	8,737.65	1.08
Fitzwilliam ..	310	31,000	.....	10,250	.....	512,156	9,730.97	1.90
Gilsun	114	11,400	.....	20,750	.....	239,736	4,794.72	2.00
Harrisville ..	201	20,100	.....	53,000	.....	360,472	5,588.41	1.55
Hinsdale	533	53,300	.....	116,175	.....	1,029,254	25,731.00	2.50
Jaffrey	414	41,400	.....	69,950	.....	932,800	16,197.60	1.70
Keene	2,505	250,500	.....	186,000	.....	6,788,116	109,777.23	1.61
Marlborough ..	479	47,900	\$1,500	38,000	.....	718,958	11,503.32	1.60
Marlow	128	12,800	.....	4,076	.....	241,164	4,027.44	1.67
Nelson	71	7,100	.....	4,480	.....	142,808	2,169.43	1.52
Richmond	134	13,400	.....	6,800	.....	299,082	4,187.15	1.40
Rindge	217	21,700	.....	650	.....	518,791	7,782.29	1.50
Roxbury	30	3,000	7,500	.....	.....	86,312	1,165.21	1.35
Stoddard	104	10,400	1,200	14,700	\$250	183,182	3,480.45	1.90

Sullivan	78	7,800	.....	3,250	.....	126,727	2,279.27	1.80
Surry	71	7,100	.....	2,700	.....	171,481	1,972.06	1.15
Swansey	458	45,800	.....	64,550	.....	763,461	12,215.38	1.60
Troy	340	34,000	.....	72,700	.....	585,191	10,241.71	1.75
Walpole	686	68,600	14,000	1,000	.....	1,561,340	25,795.82	1.65
Westmoreland	218	21,800	450	3,200	.....	468,056	6,927.23	1.48
Winchester	639	63,900	.....	72,700	5,825	1,170,789	22,246.03	1.90
Total	8,341	\$834,100	\$24,650	\$770,411	\$6,075	\$18,823,403	\$314,224.69	1.67

TABLE No. 1.—Continued.
SULLIVAN COUNTY.

Towns.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Acworth	260	\$12,313	\$47.34	...	...	...	46	\$2,677	\$58.19	392	\$10,747	\$27.41
Charlestown	385	28,090	72.96	...	...	...	28	1,875	66.96	660	19,035	28.83
Claremont	896	52,382	58.45	...	...	...	26	1,410	54.23	1,200	28,087	23.40
Cornish	354	18,954	53.54	...	...	...	18	1,260	70.00	648	15,880	24.50
Croydon	144	8,980	62.36	...	...	...	28	1,390	49.64	279	5,911	21.18
Goshen	169	9,762	57.76	2	\$126	\$63.00	12	656	54.66	141	6,228	44.17
Grantham	151	9,605	63.60	...	...	...	40	2,465	61.62	237	5,106	21.54
Langdon	136	7,964	58.55	...	...	...	12	656	54.66	318	8,582	26.98
Lempster	189	9,262	49.00	...	...	...	22	1,002	45.51	294	7,002	23.81
Newport	627	36,426	58.09	3	160	53.33	46	1,992	43.30	811	17,053	21.02
Plainfield	406	21,196	52.20	...	...	...	84	4,946	58.88	777	19,054	24.52
Springfield	187	7,735	41.36	...	...	...	40	2,305	57.51	189	4,727	25.01
Sunapee	264	13,728	52.00	...	...	...	34	1,792	52.70	375	9,660	25.76
Unity	231	11,105	48.07	1	50	50.00	53	3,115	58.77	453	11,395	25.15
Washington	188	9,710	51.64	...	...	...	20	844	42.20	230	6,088	26.43
Total	4,587	\$257,912	\$56.07	6	\$336	\$56.00	509	\$28,385	\$55.76	7,004	\$174,555	\$24.92

TABLE No. 1.—Continued.
SULLIVAN COUNTY.

TOWNS.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Acworth.....	261	\$5,535	\$21.20	688	\$1,513	\$2.19	3	\$28	\$9.33	65	\$35	.....	.....
Charlestown.....	298	7,725	25.92	976	2,605	2.66	9	110	12.33	425	155	.....	\$2,995
Claremont ..	258	4,318	16.73	440	1,574	3.57	2	25	12.50	.....	.....	214	9,980
Cornish	541	11,298	20.88	406	1,164	2.86	3	28	9.33	.....	.....	10	680
Croydon	367	13,426	36.58	511	1,069	2.09	2	30	15.00	.....	.....	1	100
Goshen	116	2,282	19.67	156	402	2.57	1	10	10.00	265	106	.....	.....
Grantham	99	1,829	18.47	323	1,168	3.61	1	10	10.00	.....	.....	.....	.....
Langdon	165	3,692	22.37	470	1,268	2.69	1	10	10.00	.....	106	.....	.....
Lempster	117	2,216	18.94	135	368	2.72	1	10	10.00	.....	.....	1	100
Newport	325	4,614	14.19	409	1,061	2.59	8	78	9.75	.....	74	.....	3,624
Plainfield	420	8,476	20.18	1,581	3,836	2.42	5	50	10.00	.....	.....	40	1,194
Springfield	157	3,297	21.00	536	1,514	2.82	.....	.....	.....	25	10	.....	450
Sunapee	86	1,486	17.27	86	212	2.46	2	14	7.00	.....	.....	22	700
Unity	235	4,938	21.01	499	1,274	2.55	3	50	16.66	100	40	.....	.....
Washington	123	2,024	16.45	221	628	2.84	.....	.....	.....	.....	.....	.....	.....
Total	3,568	\$77,156	\$21.62	7,437	\$19,656	\$2.64	41	\$453	\$11.05	880	\$526	288	\$19,823

TABLE No. 1.—Continued.
SULLIVAN COUNTY.

TOWNS.	Improved and un- improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corpora- tions out of this state.	Surplus capital in banking institu- tions.	Money on hand, at interest, or on deposit.	Stock in trade.
Acworth	\$208,799	.....	\$3,025	.....	.....	\$8,550	\$3,720
Charlestown	643,350	.....	49,225	\$10,700	.....	29,255	52,700
Claremont.	2,111,334	.....	126,862	.....	.....	84,828	282,100
Cornish	400,750	.....	6,977	.....	.....	21,231	19,940
Croydon	148,600	.....	4,000	.....	.....	4,765	3,875
Goshen	102,944	.....	2,600	.....	.....	2,300	2,100
Grantham	102,905	.....	500	.....	.....	1,630	9,268
Langdon	148,400	\$2,000	200	400	.....	17,470	6,050
Leupster	119,392	.....	500	.....	.....	2,494	3,510
Newport	1,094,528	4,100	68,256	.....	.....	21,314	136,540
Plainfield	385,450	.....	13,058	.....	.....	19,366	9,924
Springfield	113,206	.....	700	.....	.....	2,825	2,200
Sunapee	465,020	200	16,974	.....	.....	8,744	13,000
Unity	147,175	.....	1,595	.....	.....	5,639	11,900
Washington	178,612	.....	100	.....	.....	2,950	14,000
Total	\$6,370,465	\$6,300	\$294,572	\$11,100	.....	\$233,352	\$570,917

SULLIVAN COUNTY.

TOWNS.	POLLS.		Aqueducts, locks and canals, toll bridges, wharves, ferries.	Mills, factories, and machinery.	Buildings not des- ignated.	Amount of inven- tory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Acworth	151	\$15,100	.....	\$3,000	.....	\$275,042	\$5,392.18	1.96
Charlestown	385	38,500	\$8,000	13,650	.....	907,970	12,673.70	1.40
Claremont	1,649	164,900	43,400	418,300	.....	3,329,500	71,251.30	2.14
Cornish	221	22,100	10,000	10,900	.....	541,162	6,926.87	1.28
Croydon	103	10,300	.....	.....	.....	202,446	3,198.66	1.58
Goshen	114	11,400	.....	.....	.....	140,916	2,556.47	1.80
Grantham	110	11,000	.....	.....	.....	145,486	2,502.46	1.72
Langdon	100	10,000	.....	1,900	.....	208,698	2,400.31	1.15
Lempster	123	12,300	.....	4,780	.....	162,936	3,323.89	2.04
Newport	860	86,000	.....	59,400	.....	1,535,220	29,938.14	1.95
Plainfield	285	28,500	.....	2,750	.....	517,800	7,870.56	1.52
Springfield	128	12,800	.....	700	.....	152,469	4,048.45	2.65
Sunapee	288	28,800	.....	.....	.....	560,330	10,504.80	1.87
Unity	169	16,900	4,500	2,650	.....	222,317	3,268.44	1.47
Washington	149	14,900	.....	13,300	.....	243,246	3,405.48	1.40
Total	4,835	\$483,500	\$65,900	\$531,330	.....	\$9,145,538	\$169,241.71	1.85

TABLE No. 1.—Continued.
GRAFTON COUNTY.

TOWNS.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Alexandria	209	\$11,484	\$54.94	...	...	...	45	\$2,444	\$54.31	337	\$9,822	\$20.24
Ashland	224	14,332	63.98	1	\$20	\$20.00	12	500	41.66	213	5,252	24.65
Bath	439	21,592	49.18	...	...	...	18	1,114	61.88	1,089	23,426	21.51
Benton	103	4,850	47.08	...	...	...	9	300	33.33	290	6,082	20.97
Bethlehem	379	19,695	51.96	2	100	50.00	14	955	68.21	797	17,320	22.06
Bridgewater	91	3,330	36.59	...	...	...	26	1,192	45.84	150	3,184	21.22
Bristol	352	18,552	52.70	...	...	...	14	756	54.00	456	11,586	25.40
Campton	366	16,802	45.90	...	...	...	66	3,140	47.56	526	11,536	21.93
Canaan	478	18,181	38.03	1	10	10.00	24	1,100	45.83	955	20,003	20.94
Dorchester	95	4,384	46.14	...	...	...	6	260	43.33	158	3,530	22.34
Easton	111	5,095	45.90	...	...	...	34	1,484	43.64	162	2,772	17.11
Ellsworth	21	338	16.09	...	...	...	33	780	23.63	51	635	12.45
Enfield	365	19,790	54.21	...	...	...	42	2,045	48.69	668	13,780	20.62
Franconia	207	10,950	52.89	...	...	...	4	225	56.25	254	5,600	22.04
Grafton	257	11,828	46.02	...	...	...	52	2,728	52.46	453	10,404	22.96
Groton	114	3,232	28.35	...	...	...	14	614	43.85	185	3,120	16.86

Hanover.....	498	28,332	56.89	.....	24	1,376	57.33	1,165	25,758	22.10
Haverhill.....	715	35,134	49.13	.....	4	200	50.00	2,019	44,164	21.37
Hebron.....	92	3,910	42.50	.....	25	1,108	44.32	149	3,168	21.26
Holderness.....	247	8,530	34.53	.....	34	2,156	63.41	359	8,440	23.52
Landaff.....	210	10,700	50.95	5 100	14	660	47.14	355	7,950	22.39
Lebanon.....	773	46,134	59.55	.....	20	1,032	51.60	1,469	30,650	20.86
Lincoln.....	254	10,160	40.00	.....	2	80	40.00	15	300	20.00
Lisbon.....	748	37,609	50.27	.....	.....	.....	.....	1,020	24,054	23.58
Littleton.....	809	42,535	52.57	2 50	19	905	47.63	1,210	29,724	24.56
Livermore.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyman.....	208	9,502	45.68	.....	.....	.....	.....	595	13,962	23.46
Lyme.....	427	26,110	61.14	.....	38	2,370	62.36	1,279	31,220	24.40
Monroe.....	212	9,392	44.30	.....	.....	.....	.....	679	14,450	21.28
Orange.....	71	2,891	40.71	.....	16	852	53.25	144	3,594	24.95
Orford.....	304	19,850	65.29	4 200	22	1,365	62.04	815	18,584	22.80
Piermont.....	287	17,332	60.39	1 100	10	616	61.60	993	21,791	21.94
Plymouth.....	439	23,497	53.52	1 50	28	1,487	53.10	391	9,145	23.38
Rumney.....	290	13,751	47.41	.....	30	1,742	58.06	455	10,473	23.01
Thornton.....	213	8,674	40.72	.....	20	810	40.50	289	5,047	17.46
Warren.....	353	16,379	46.39	.....	2	100	50.00	359	6,768	18.85
Waterville.....	45	2,170	48.22	.....	.....	.....	.....	4	100	25.00
Wentworth.....	242	11,284	46.62	2 100	20	990	49.50	537	10,938	20.36
Woodstock.....	125	3,544	28.35	.....	2	70	35.00	144	2,544	17.66
Total.....	11,373	\$571,855	\$50.28	19 \$730	743	\$37,556	\$50.51	21,189	\$168,076	\$22.09

TABLE No. 1.—Continued.

GRAFTON COUNTY.

Towns.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Alexandria	226	\$1,136	\$18.30	586	\$1,688	\$2.88	1	\$12	\$12.00	250	\$100	48	\$1,510
Ashland	48	780	16.25	123	354	2.87	9	90	10.00	1,550	540		
Bath	725	11,020	15.20	1,053	3,438	3.26							
Benton	65	781	12.01	42	133	3.16							
Bethlehem	132	3,067	23.23	246	1,005	4.08	19	185	9.73		75		7,850
Bridgewater	106	1,872	17.66	160	402	2.51							
Bristol	148	2,312	15.62	99	296	3.00				50	24	46	1,740
Campton	247	4,318	17.48	471	1,416	3.00							590
Canaan	266	3,870	14.54	660	1,617	2.45	6	78	13.00			17	600
Dorchester	60	990	16.50	562	1,698	3.02							
Easton	136	1,986	14.60	37	104	2.81							
Ellsworth	5	51	10.20	116	215	1.85							
Enfield	264	3,645	13.80	637	1,420	2.22						38	1,645
Franconia	69	1,322	19.15	89	221	2.48							2,950
Grafton	205	3,516	17.15	754	2,080	2.75	4	40	10.00				
Groton	97	1,426	14.70	215	556	2.58							

VALUATION AND TAXATION.

69

Hanover.....	484	7,144	14.76	607	1,526	2.51	6	86	14.33	275	110	43	2,300
Haverhill.....	920	15,000	16.30	442	1,403	3.17	49	438	8.93	150	70	53	1,050
Hebron.....	119	2,132	17.91	212	588	2.77	1	14	14.00	.....	.....	3	240
Holderness.....	91	1,900	20.87	149	432	2.90	.....	.....	.....	150	50	20	1,070
Landaff.....	236	3,916	16.59	111	380	3.42	1	10	10.00	.....	.....	.....	250
Lebanon.....	361	5,072	14.05	1,039	2,484	2.39	18	150	8.33	375	101	270	9,402
Lincoln.....	2	40	20.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lisbon.....	718	11,904	16.57	940	2,896	3.08	14	78	5.57	.....	.....	328	9,496
Littleton.....	610	10,986	18.00	497	1,940	3.90	5	45	9.00	.....	.....	.....	5,650
Livermore.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynan.....	301	5,266	17.49	246	896	3.64	2	20	10.00	.....	.....	.....	.....
Lyne.....	483	8,420	17.43	687	2,080	3.02	1	20	20.00	230	115	.....	.....
Monroe.....	442	6,782	15.34	166	576	3.47	12	136	11.33	.....	.....	.....	.....
Orange.....	67	1,197	17.86	109	354	3.24	.....	.....	.....	.....	.....	.....	.....
Orford.....	499	8,092	16.21	507	1,621	3.19	.....	.....	.....	.....	.....	19	1,050
Piermont.....	307	5,231	17.03	684	1,970	2.88	2	22	11.00	.....	.....	.....	.....
Plymouth.....	197	2,837	14.40	241	646	2.68	4	34	8.50	.....	.....	.....	4,100
Rumney.....	176	2,720	15.45	241	561	2.32	4	50	12.50	.....	.....	.....	373
Thornton.....	139	2,279	16.39	211	531	2.51	1	5	5.00	.....	.....	.....	.....
Warren.....	64	862	13.47	381	830	2.17	1	12	12.00	.....	.....	50	1,050
Waterville.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38	1,375
Wentworth.....	134	1,730	12.91	65	180	2.77	1	12	12.00	.....	.....	.....	.....
Woodstock.....	30	328	10.93	36	66	1.83	.....	.....	.....	.....	.....	17	1,450
Total.....	9,179	\$148,930	\$16.22	13,421	\$38,603	\$2.87	161	\$1,537	\$9.54	3,030	\$1,188	990	\$56,641

TABLE No. 1.—Continued.

GRAFTON COUNTY.

TOWNS.	Improved and un-improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital in banking institutions.	Money on hand, at interest, or on deposit.	Stock in trade.
Alexandria.....	\$156,336	.....	.....	.....	.....	.....	\$2,476
Ashland.....	372,108	.....	\$4,115	.....	.....	\$6,038	44,500
Bath.....	233,012	.....	8,812	.....	.....	14,700	39,600
Benton.....	90,357	.....	.....	.....	.....	500	3,225
Bethlehem.....	577,035	.....	1,000	.....	.....	5,000	14,000
Bridgewater.....	90,874	.....	.....	.....	.....	100	150
Bristol.....	492,130	.....	42,905	.....	.....	4,830	61,600
Campton.....	253,014	.....	3,778	.....	.....	4,830	23,440
Canaan.....	414,540	.....	2,000	\$1,600	.....	16,875	24,910
Dorchester.....	69,706	.....	.....	.....	.....	.....	8,900
Easton.....	64,074	.....	1,792	.....	.....	.....	6,800
Ellsworth.....	19,502	.....	.....	.....	.....	.....	.....
Enfield.....	430,990	\$2,000	9,900	.....	.....	14,130	48,100
Fraconia.....	336,615	.....	4,500	.....	.....	19,833	11,550
Grafton.....	185,998	1,000	1,000	.....	\$500	11,024	17,350
Groton.....	72,952	.....	.....	.....	.....	.....	3,300

Hanover	938,942	1,000	48,510	21,200	84,358	41,080
Haverhill	885,150	1,000	25,430	.....	50,000	82,500
Hebron	71,292	.....	900	.....	.....	5,400
Holderness	260,392	.....	100	.....	1,500	8,064
Laudaff	156,544	.....	4,000	.....	13,400	20,564
Lebanon	1,710,254	45,000	83,461	1,000	120,263	149,550
Lincoln	170,942	.....	1,300	.....	.....	56,800
Lisbon	832,767	.....	3,430	.....	62,684	65,300
Littleton	1,241,105	.....	80,960	.....	17,585	148,425
Livermore . . . . .	.....	.....	.....	.....	.....	.....
Lyman	125,186	.....	.....	.....	1,050	4,400
Lyme	337,495	.....	.....	.....	17,192	22,655
Monroe	164,274	.....	18,600	.....	7,784	5,110
Orange	46,685	.....	.....	.....	970	100
Orford	287,825	500	200	.....	7,475	20,314
Piermont	249,688	.....	.....	.....	19,060	5,925
Plymouth	647,337	.....	42,170	624	400	57,405
Runney	219,776	.....	1,000	.....	1,000	23,800
Thornton	139,999	.....	.....	.....	.....	11,755
Warren	217,815	.....	500	.....	6,208	36,286
Waterville	125,550	.....	.....	.....	.....	15,000
Wentworth	144,628	500	.....	.....	1,474	15,230
Woodstock	181,876	.....	.....	.....	9,980	2,120
Total	\$13,014,795	\$51,000	\$390,363	\$24,424	\$520,243	\$1,110,684

TABLE No. 1.—*Continued.*
GRAFTON COUNTY.

TOWNS.	POLLS.		Aqueducts, locks and canals, toll ferries, bridges, wharves, mills, factories and machinery.	Buildings not designated.	Amount of inventory.	Amount of taxes.	Rate per cent.
	No.	Valuation.					
Alexandria	171	\$17,100	.....	\$800	\$205,636	\$5,260.43	2.55
Ashland	356	35,600	.....	.....	600,761	10,813.70	1.80
Bath	317	31,700	\$550	.....	398,834	9,511.63	2.38
Benton	75	7,500	.....	.....	115,028	2,012.94	1.75
Bethlehem	319	31,900	.....	.....	704,387	16,636.52	2.36
Bridgewater	71	7,100	.....	.....	108,504	1,812.11	1.67
Bristol	424	42,400	12,000	.....	789,281	17,277.91	2.19
Campton	268	26,800	300	.....	401,116	7,540.93	1.88
Canaan	380	38,000	6,975	.....	555,159	9,449.44	1.70
Dorchester	74	7,400	.....	.....	98,618	2,514.76	2.55
Easton	82	8,200	.....	.....	92,307	1,384.60	1.50
Ellsworth	27	2,700	.....	.....	24,321	853.82	3.51
Enfield	461	46,100	600	950	645,445	12,246.54	1.90
Franconia	174	17,400	1,000	7,067	424,833	6,382.09	1.50
Grafton	217	21,700	.....	.....	274,368	5,116.86	1.86
Grafton	115	11,500	.....	150	101,350	2,736.45	2.70

VALUATION AND TAXATION.

73

Hanover	490	49,000	.....	2,000	.....	1,252,722	21,737.39	1.74
Haverhill	917	91,700	38,300	.....	.....	1,272,439	31,447.64	2.47
Helron	63	6,300	.....	.....	.....	95,052	1,425.78	1.50
Holderness	180	18,000	.....	.....	.....	310,634	6,212.68	2.00
Landaff	171	17,100	.....	3,800	.....	239,374	3,590.61	1.50
Lebanon	1,369	136,900	3,000	216,600	.....	2,591,056	51,338.51	1.98
Lincoln	548	54,800	.....	21,000	.....	315,422	5,362.14	1.70
Lisbon	669	66,900	16,000	55,874	.....	1,188,992	30,371.35	2.55
Littleton	1,005	100,500	3,000	.....	.....	1,683,410	40,474.33	2.40
Livermore	.....	.....	.....	.....	.....	.....	.....	.....
Lynau	140	14,000	.....	4,200	150	178,632	3,468.10	1.94
Lyme	299	29,900	700	7,650	.....	485,927	8,602.04	1.77
Mouroe	134	13,400	4,324	34,200	.....	279,028	3,009.30	1.10
Orange	51	5,100	.....	2,100	350	61,193	1,381.05	2.15
Orford	230	23,000	.....	3,800	.....	393,876	6,853.44	1.74
Piermont	192	19,200	.....	7,800	.....	348,735	6,195.23	1.78
Plymouth	623	62,300	.....	9,450	.....	861,482	17,399.61	2.02
Rumney	249	24,900	.....	5,450	.....	305,596	5,653.52	1.85
Thornton	159	15,900	.....	1,500	.....	186,500	4,661.60	2.50
Warren	293	29,300	.....	26,700	.....	342,810	5,484.96	1.60
Waterville	19	1,900	.....	3,000	.....	149,095	1,612.75	1.08
Wentworth	179	17,900	.....	3,400	.....	208,366	4,417.15	2.12
Woodstock	173	17,300	.....	.....	.....	219,278	5,063.69	2.58
Total	11,684	\$1,168,400	\$86,049	\$811,526	\$9,467	\$18,512,567	\$377,973.63	2.04

TABLE No. 1.—Continued.

COOS COUNTY.

TOWNS.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Berlin	593	\$24,775	\$41.77	.....	.....	.....	.....	.....	.....	286	\$5,357	\$18.73
Carroll	259	10,018	38.67	.....	.....	.....	.....	.....	.....	306	5,770	18.85
Clarksville	158	6,112	38.68	.....	.....	.....	8	\$310	\$38.75	361	6,896	19.10
Colebrook	839	40,610	48.40	.....	.....	.....	20	950	47.50	1,147	25,131	21.91
Columbia	405	17,091	42.20	.....	.....	.....	.....	.....	.....	627	11,968	19.08
Dalton	210	10,722	51.05	.....	.....	.....	8	320	40.00	486	10,483	21.57
Dunmer	150	6,723	44.82	.....	.....	.....	2	100	50.00	347	7,113	20.49
Errol	143	7,820	54.68	2	\$20	\$10.00	2	100	50.00	109	2,501	22.95
Gorham	279	15,076	54.03	.....	.....	.....	.....	.....	.....	168	4,060	24.16
Jefferson	492	22,294	45.31	.....	.....	.....	2	80	40.00	800	17,518	21.89
Lancaster	731	34,996	47.67	.....	.....	.....	4	165	41.25	1,596	32,496	20.36
Milan	612	19,418	30.21	.....	.....	.....	12	410	34.16	505	7,520	14.89
Northumberland	362	19,980	55.19	1	25	25.00	8	310	38.75	381	7,487	19.65
Pittsburg	312	8,853	28.37	4	160	40.00	2	67	33.50	703	13,570	19.30
Randolph	56	2,210	39.46	.....	.....	.....	.....	.....	.....	91	1,932	20.55
Shelburne	153	7,948	51.94	.....	.....	.....	.....	.....	.....	118	2,824	23.93

Stark.	260	14,162	54.46	.....	.....	.....	.....	.....	.....	241	5,262	21.56
Stewartstown	506	23,159	45.76	.....	.....	.....	18	742	41.16	775	17,694	22.70
Stratford	313	18,660	59.61	.....	.....	.....	8	420	52.50	535	11,098	20.74
Wentworth's Location	20	895	44.75	.....	.....	.....	.....	.....	.....	9	123	13.66
Whitefield.	434	26,950	60.02	.....	.....	.....	16	750	46.87	809	16,789	20.75
Total.	7,320	\$337,572	\$46.11	7	\$205	\$29.28	110	\$4,724	\$12.94	10,406	\$213,592	\$20.52

TABLE No. 1.—Continued.

COOS COUNTY.

TOWNS.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Berlin.....	12	\$150	\$12.50	9	\$27	\$3.00	14	\$115	\$8.21	.....	.....	.....	\$5,360
Carroll.....	77	946	12.28	44	122	2.77	40	400	10.00	.....	.....	38	5,150
Clarksville.....	109	1,588	14.56	741	2,502	3.36	.....	.....	.....	.....	.....	.....	.....
Colebrook.....	844	16,137	19.11	1,497	5,305	3.58	2	25	12.50	.....	.....	6	550
Columbia.....	327	5,115	15.64	650	2,634	3.12	.....	.....	.....	.....	.....	.....	460
Dalton.....	253	3,738	14.77	284	858	3.02	.....	.....	.....	.....	.....	.....	.....
Dummer.....	73	1,061	14.53	400	1,004	2.51	6	74	12.33	.....	.....	.....	.....
Errol.....	88	1,551	17.62	212	740	3.49	3	12	4.00	.....	.....	2	100
Gorham.....	13	198	15.23	67	188	2.80	.....	.....	.....	.....	.....	75	2,720
Jefferson.....	408	6,002	14.71	500	1,432	2.86	.....	.....	.....	.....	.....	31	2,600
Lancaster.....	647	9,471	14.63	611	1,889	3.09	5	44	8.80	.....	.....	.....	3,420
Milan.....	191	1,852	9.73	359	720	2.00	14	120	8.57	.....	.....	.....	.....
Northumberland.....	388	7,034	18.12	317	811	2.55	2	16	8.00	.....	.....	1	50
Pittsburg.....	300	4,466	14.88	937	2,809	3.00	9	71	7.88	.....	.....	.....	.....
Randolph.....	27	394	14.59	110	330	3.00	.....	.....	.....	.....	.....	10	450
Shelburne.....	27	478	17.70	173	502	2.90	8	74	9.25	.....	.....	22	1,160

Stark	125	1,776	14.20	248	682	2.75	1	10	10.00	.....	.....	.....	100
Stewartstown	349	8,003	22.93	843	4,157	4.94	2	30	15.00	.....	.....	.....	200
Stratford	256	3,463	13.52	243	677	2.78	13	120	9.23	.....	.....	.....	.....
Wentworth's Loc'n	8	92	11.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whitefield	269	5,031	18.77	179	539	3.01	.....	.....	.....	.....	.....	44	3,000
Total	4,791	\$78,546	\$16.37	8,424	\$27,328	\$3.24	119	\$1,111	\$9.33	.....	\$150	229	\$25,320

TABLE No. 1.—Continued.

COOS COUNTY.

TOWNS.	Improved and un- improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corpora- tions out of this state.	Surplus capital in banking institu- tions.	Money on hand, at interest, or on deposit.	Stock in trade.
Berlin.....	\$1,539,985	.....	\$49,700	.....	.....	\$400	\$357,672
Carroll.....	244,874	.....	.....	.....	.....	.....	2,200
Clarksville.....	105,694	.....	.....	.....	.....	4,964	10,278
Colebrook.....	562,980	.....	79,150	.....	.....	69,365	51,500
Columbia.....	242,727	.....	2,500	.....	.....	3,625	2,726
Dalton.....	117,455	.....	.....	.....	.....	.....	11,525
Dummer.....	109,586	.....	500	.....	.....	3,875	16,420
Errol.....	110,607	.....	.....	.....	.....	755	21,401
Gorham.....	382,036	.....	14,200	.....	.....	2,700	43,350
Jefferson.....	277,526	.....	.....	.....	.....	.....	2,910
Lancaster.....	1,087,074	.....	41,580	.....	.....	38,524	105,135
Milan.....	214,708	.....	5,800	.....	.....	4,840	78,806
Northumberland.....	453,745	.....	22,780	.....	.....	500	89,200
Pittsburg.....	328,781	.....	.....	.....	.....	2,250	82,085
Randolph.....	82,188	.....	.....	.....	.....	.....	.....
Shelburne.....	119,700	.....	1,500	.....	.....	300	8,128

Stark.....	174,632	.....	1,400	.....	.....	.....	5,300	25,504
Stewartstown	282,177	.....	6,500	.....	.....	.....	25,389	27,000
Stratford	291,538	.....	8,900	.....	.....	.....	6,976	30,200
Wentworth's Location.....	52,624	.....	.....	.....	.....	.....	1,100	2,631
Whitefield	480,066	.....	800	.....	.....	.....	5,300	117,174
Total.....	\$7,260,706	.....	\$235,310	.....	.....	.....	\$176,163	\$1,085,845

TABLE No. 1.—Continued.

COOS COUNTY.

Towns.	POLLS.		Aqueducts, locks and canals, toll ferries.	Mills, factories, and machinery.	Buildings not des- ignated.	Amount of inven- tory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Berlin	2,369	\$236,900	.....	\$1,051,975	.....	\$3,275,566	\$50,186.67	2.45
Carroll	187	18,700	.....	900	\$000	289,980	5,364.95	1.85
Clarksville	76	7,600	.....	300	.....	146,241	2,411.94	1.65
Colebrook	526	52,600	\$5,325	.....	.....	910,628	15,519.98	1.70
Columbia	183	18,300	600	6,350	.....	313,496	4,608.40	1.47
Dalton	161	16,100	300	.....	.....	171,501	4,716.53	2.75
Dummer	105	10,500	.....	.....	.....	156,956	2,916.81	1.85
Errol	69	6,900	15,000	.....	.....	167,507	2,847.61	1.70
Gorham	512	51,200	23,000	.....	60	538,788	12,122.73	2.25
Jefferson	304	30,400	.....	.....	.....	360,762	8,297.52	2.30
Lancaster	871	87,400	.....	51,475	.....	1,493,669	33,875.00	2.27
Milan	285	28,500	.....	27,500	200	390,484	5,466.77	1.40
Northumberland	523	52,300	.....	120,000	.....	774,238	13,561.38	1.75
Pittsburg	182	18,200	.....	.....	.....	461,315	9,456.95	2.05
Randolph	45	4,500	.....	.....	.....	92,001	1,840.08	2.00
Shelburne	78	7,800	.....	600	.....	151,014	2,038.69	1.35

Stark.....	212	21,200	.....	8,550	200	258,778	5,046.17	1.95
Stewartstown	305	30,500	.....	1,900	.....	427,451	8,848.05	2.07
Stratford	249	24,900	.....	2,700	2,050	403,202	8,901.48	2.20
Wentworth's Location.....	19	1,900	1,500	500	.....	59,865	927.88	1.55
Whitefield	592	59,200	.....	35,250	.....	749,949	15,724.33	2.10
Total	7,856	\$785,600	\$46,725	\$1,311,000	\$3,500	\$11,593,397	\$244,682.82	2.11

TABLE No. 1.—Continued.

SUMMARY.

TOWNS.	HORSES.			ASSES AND MULES.			OXEN.			COWS.		
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.
Rockingham...	9,209	\$522,639	\$56.75	14	\$841	\$60.07	448	\$27,181	\$60.67	12,790	\$339,062	\$26.50
Strafford.....	5,033	306,271	60.85	2	20	10.00	415	24,078	58.01	5,805	153,845	26.84
Belknap.....	3,882	198,319	51.08	1	25	25.00	467	23,708	50.76	5,616	132,448	23.58
Carroll.....	4,259	198,806	46.67	7	157	22.42	975	54,863	56.26	5,397	118,135	21.88
Merrimack....	8,947	468,471	52.36	15	890	59.33	817	46,045	56.35	14,384	344,324	23.93
Hillsborough..	11,279	693,247	61.46	9	235	26.11	306	17,486	57.14	16,139	442,701	27.43
Cheshire.....	6,653	415,733	62.48	17	891	52.41	354	22,455	63.43	9,875	272,482	27.59
Sullivan.....	4,587	257,212	56.07	6	336	56.00	509	28,385	55.76	7,004	174,555	24.92
Grafton.....	11,373	571,855	50.28	19	730	38.42	743	37,556	50.54	21,189	468,076	22.09
Coös.....	7,320	337,572	46.11	7	205	29.28	110	4,724	42.94	10,406	213,592	20.52
Total.....	72,542	\$3,970,125	\$54.72	97	\$4,330	\$44.63	5,144	\$286,481	\$55.69	108,605	\$2,661,220	\$24.50

TABLE No. 1.—Continued.

SUMMARY.

TOWNS.	OTHER NEAT STOCK.			SHEEP.			HOGS.			FOWLS.		CARRIAGES.	
	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Average per head.	Number.	Valuation.	Number.	Valuation.
Rockingham	2,524	\$18,201	\$19.09	1,744	\$5,929	\$3.40	249	\$2,471	\$9.92	10,125	\$5,614	706	\$115,089
Stafford	1,385	26,866	19.39	1,391	4,417	3.17	50	575	11.50	1,165	644	1,502	76,866
Belknap	3,042	56,143	18.45	3,041	9,480	3.11	57	594	10.42	2,240	875	240	21,287
Carroll	2,589	54,891	21.20	2,744	7,416	2.70	54	492	9.11	.....	.....	332	17,942
Merrimack	5,734	106,247	18.52	7,026	20,022	2.84	120	1,334	11.11	2,727	1,223	702	57,977
Hillsborough	4,911	86,206	17.55	1,891	5,768	3.05	268	3,303	12.32	33,701	18,535	348	210,553
Cheshire	3,212	65,344	20.34	4,391	12,029	2.73	104	1,422	13.67	2,338	1,094	63	59,364
Sullivan	3,568	77,156	21.62	7,437	19,656	2.64	41	453	11.05	880	526	288	19,823
Grafton	9,179	148,930	16.22	13,421	38,603	2.87	161	1,537	9.54	3,030	1,188	990	56,641
Cooks	4,791	78,546	16.37	8,424	27,328	3.24	119	1,111	9.33	.....	150	229	25,320
Total	40,935	\$748,530	\$18.28	51,510	\$150,648	\$2.92	1,223	\$13,292	\$10.86	56,206	\$29,849	5,460	\$660,862

TABLE No. 1.—Continued.

SUMMARY.

COUNTIES.	Improved and un-improved lands and buildings.	Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital in banking institutions.	Money on hand, at interest, or on deposit.	Stock in trade.
Rockingham.....	\$21,423,376	\$14,985	\$186,559	\$76,400	.....	\$348,918	\$2,081,867
Strafford.....	13,977,869	29,450	373,384	100	\$17	216,308	1,898,332
Belknap.....	7,159,392	8,800	176,793	1,652	.....	181,108	518,062
Carroll.....	4,894,852	.....	14,662	33,500	.....	76,695	274,272
Merrimack.....	19,903,709	34,722	380,529	47,600	12,070	506,654	1,630,951
Hillsborough.....	40,657,613	55,000	680,096	12,167	150	1,800,038	5,606,428
Cheshire.....	13,487,603	105,146	746,096	6,715	70	855,272	1,136,451
Sullivan.....	6,370,465	6,300	294,572	11,100	.....	233,352	570,917
Grafton.....	13,014,795	51,000	390,363	24,424	500	520,243	1,110,684
Cooks.....	7,260,706	.....	235,310	.....	.....	176,163	1,085,845
Total.....	\$148,150,380	\$305,403	\$3,778,364	\$213,658	\$12,807	\$4,914,751	\$15,913,809

TABLE No. 1.—*Continued.*
SUMMARY.

COUNTIES.	TOLLS.		Aqueducts, locks and canals, toll bridges, wharves, ferries.	Mills, factories, and machinery.	Buildings not designated.	Amount of inventory.	Amount of taxes.	Rate per cent.
	No.	Valuation.						
Rockingham.....	12,033	\$1,203,300	\$6,550	\$846,469	\$950	\$27,556,401	\$519,607.62	1.88
Strafford.....	10,020	1,002,000	.....	2,859,672	6,100	20,958,814	419,171.16	2.00
Belknap.....	5,283	528,300	34,080	424,927	20,932	9,496,925	196,017.23	2.06
Carroll.....	4,470	447,000	34,400	139,654	4,010	6,371,747	126,798.13	1.99
Merrimack.....	13,511	1,351,100	119,700	1,567,966	3,350	26,604,884	503,660.45	1.89
Hillsborough.....	28,472	2,847,200	284,000	10,515,828	26,425	63,962,979	1,340,668.63	2.10
Cheshire.....	8,341	834,100	24,650	770,411	6,075	18,823,403	314,224.09	1.67
Sullivan.....	4,835	483,500	65,900	531,330	.....	9,145,538	169,241.71	1.85
Grafton.....	11,684	1,168,400	86,049	811,526	9,467	18,512,567	377,973.63	2.04
Coös.....	7,856	785,600	46,725	1,811,000	3,500	11,593,397	244,682.82	2.11
Total.....	106,505	\$10,650,500	\$702,054	\$19,778,783	\$80,809	\$213,026,655	\$4,212,046.07	1.98
Unincorporated places.....	.....	.....	.....	.....	.....	1,590,000	7,648.48	.48
Savings bank deposits taxable.....	.....	.....	.....	.....	.....	\$214,616,655	\$4,219,694.55	1.96
Insurance capital.....	.....	.....	.....	.....	.....	47,139,662	356,437.83	1.00
Total.....	.....	.....	.....	.....	.....	1,495,000	14,950.00	1.00
Total.....	.....	.....	.....	.....	.....	\$263,251,317	\$4,591,082.38	1.74

TABLE NO. 2.

EQUALIZATION AND APPORTIONMENT.

TABLE No. 2.—EQUALIZATION AND APPORTIONMENT.

Amounts added to and deducted from inventories of the several towns to make the equalized valuation upon which the apportionment is made, and the sum to be paid by each town on each \$1,000 of the state tax.

ROCKINGHAM COUNTY.

TOWNS.	Amount of inven- tory.	Insurance stock.	Deposits in sav- ings banks.	Railroad stock, right of way and buildings.	Increase and de- crease by board.	Equalized valua- tion.	Proportion to each \$1,000 of state tax.
Atkinson	\$303,770	\$1,000	\$26,011	\$12,807	.....	\$343,588	\$1.20
Auburn	342,621	.....	150,878	2,650	.....	496,149	1.73
Brentwood	283,641	300	62,284	5,308	.....	351,533	1.22
Candia	340,249	1,100	276,570	7,633	.....	625,552	2.18
Chester	366,434	.....	172,173	3,005	.....	541,612	1.89
Danville	197,742	.....	38,006	335	.....	236,083	.82
Deerfield	452,562	.....	176,877	61,608	.....	671,047	2.34
Derry	1,400,273	.....	380,143	40,027	.....	1,895,443	6.63
East Kingstown	235,722	1,000	13,358	8,917	.....	258,997	.90
Epping	697,267	200	160,237	33,578	.....	841,282	2.94
Exeter	3,069,502	24,000	410,899	271,298	.....	3,775,699	13.30
Fremont	269,975	.....	39,832	8,480	.....	318,287	1.11
Greenland	370,343	1,000	127,161	35,159	.....	543,663	1.90
Hampstead	378,353	.....	42,006	35,348	.....	455,707	1.59

VALUATION AND TAXATION.

89

Hampton.....	770,766	.....	72,068	16,009	* 25,000	883,843	3.09
Hampton Falls....	289,858	8,000	23,833	8,241	.....	329,932	1.15
Kensington.....	251,247	.....	20,740	4,730	.....	276,717	.96
Kingston.....	344,983	.....	14,966	6,393	.....	366,342	1.28
Londonderry.....	584,472	.....	245,712	13,590	.....	843,774	2.95
Newcastle.....	308,041	.....	122,964	1,947	.....	432,952	1.51
Newfields.....	240,179	2,600	89,336	38,199	† 40,179	330,135	1.15
Newington.....	227,618	.....	97,152	6,752	.....	331,522	1.16
Newmarket.....	1,329,858	500	148,830	16,936	.....	1,496,124	5.23
Newton.....	368,447	.....	1,996	10,347	.....	380,790	1.33
North Hampton....	701,242	6,500	147,590	4,538	* 20,000	879,870	3.07
Northwood.....	464,465	2,200	246,057	1,021	† 20,000	693,743	2.42
Nottingham.....	336,111	.....	61,087	786	.....	397,984	1.39
Plaistow.....	352,946	.....	3,378	7,563	.....	363,887	1.27
Portsmouth.....	9,009,880	161,500	2,918,923	748,022	* 100,000	12,938,325	45.35
Raymond.....	447,710	.....	186,351	9,920	.....	643,981	2.25
Rye.....	681,284	1,500	482,914	7,060	* 20,000	1,192,758	4.17
Salem.....	772,073	.....	45,286	7,130	.....	824,489	2.88
Sandown.....	156,795	.....	22,110	5,870	.....	184,775	.64
Seabrook.....	288,528	.....	9,601	5,534	* 20,000	323,663	1.13
South Hampton....	189,449	.....	18,588	134	.....	208,121	.72
Stratham.....	395,600	.....	127,891	10,633	.....	534,124	1.86
Windham.....	336,395	.....	37,823	12,769	.....	386,987	1.35
1902.....	\$27,556,401	\$211,400	\$7,221,581	\$1,470,277	* \$139,821	\$36,599,480	\$128.06
1898.....	26,843,208						
Gain.....	\$713,193						

* Increase. † Decrease.

TABLE No. 2.—Continued.
STRAFFORD COUNTY.

TOWNS.	Amount of inven- tory.	Insurance stock.	Deposits in sav- ings banks.	Railroad stock, right of way and buildings.	Increase and de- crease by board.	Equalized valua- tion.	Proportion to each \$1,000 of state tax.
Barrington.....	\$460,340	\$600	\$178,493	\$9,942	† \$40,000	\$609,375	\$2.13
Dover.....	8,550,831	4,100	2,751,139	609,923	* 100,000	12,015,993	42.08
Durham.....	614,963	.....	172,157	30,692	.....	817,812	2.86
Farmington.....	1,129,507	.....	305,841	16,797	* 50,000	1,502,145	5.27
Lee.....	291,916	.....	105,232	17,809	† 10,000	404,957	1.41
Madbury.....	222,528	.....	152,995	6,817	.....	382,340	1.33
Middleton.....	109,876	.....	22,739	.....	† 14,876	117,739	.41
Milton.....	624,385	.....	370,882	4,301	* 25,615	1,025,183	3.58
New Durham.....	212,576	.....	45,113	2,837	† 10,000	250,526	.87
Rochester.....	4,080,538	17,000	1,580,867	127,313	.....	5,805,718	20.31
Rollinsford.....	1,030,601	1,000	408,206	34,337	* 100,000	1,574,144	5.50
Somersworth.....	3,136,694	3,100	974,028	31,900	* 25,000	4,170,722	14.59
Strafford.....	494,059	.....	206,838	33	† 60,000	640,930	2.24
1902.....	\$20,958,814	\$25,800	\$7,274,530	\$892,701	* \$165,739	\$29,317,584	\$102.58
1898.....	21,054,714	.....	.....	.....	.....	.....	.....
Loss.....	\$95,900	.....	.....	.....	.....	.....	.....

* Increase.

† Decrease.

BELKNAP COUNTY.

Alton	\$617,232	.....	\$119,460	\$38,979	.....	\$775,671	\$2.71
Barnstead	478,360	\$3,000	206,618	6,004	.....	693,982	2.42
Belmont	527,498	.....	176,229	11,983	.....	715,710	2.50
Center Harbor	246,802	.....	110,027	357	.....	357,186	1.24
Gifford	396,714	2,500	99,445	12,686	.....	511,345	1.78
Gilmanston	488,036	500	167,097	291	+ \$50,000	605,924	2.13
Laconia	4,442,646	25,000	1,082,151	312,364	.....	5,862,161	20.53
Meredith	675,380	8,000	373,364	22,354	.....	1,079,098	3.77
New Hampton	296,665	.....	127,234	4,451	.....	428,350	1.49
Sanbornton	366,220	.....	223,715	2,155	.....	592,090	2.07
Tilton	961,372	3,000	409,343	183,563	.....	1,557,978	5.45
1902	\$9,496,925	\$42,000	\$3,094,683	\$595,187	+ \$50,000	\$13,178,795	\$46.09
1898	9,155,763						
Gain	\$341,162						

* Increase.

† Decrease.

TABLE No. 2.—Continued.

CARROLL COUNTY.

Towns.	Amount of inven- tory.	Insurance stock.	Deposits in sav- ings banks.	Railroad stock, right of way and buildings.	Increase and de- crease by board.	Equalized valua- tion.	Proportion to each \$1,000 of state tax.
Albany	\$74,612	.....	\$2,322	.....	*\$30,000	\$106,934	\$0.37
Bartlett	380,752	.....	20,512	\$29,715	†30,000	400,979	1.41
Brookfield	118,122	.....	33,638	1,800	.....	153,560	.53
Chatham	92,834	.....	1,199	.....	*\$30,000	124,033	.43
Conway	959,380	\$1,000	185,461	59,651	.....	1,205,492	4.21
Eaton	126,920	.....	9,754	.....	†10,000	126,674	.44
Effingham	228,131	.....	24,458	11	†8,131	244,469	.85
Freedom	236,334	.....	13,072	.....	.....	249,406	.89
Hart's Location	15,625	.....	8,076	9,637	.....	33,338	.11
Jackson	285,204	.....	26,767	100	*\$25,000	337,071	1.17
Madison	172,982	.....	41,525	2,764	.....	217,271	.76
Moultonborough	344,906	.....	104,694	575	.....	450,175	1.58
Ossipee	509,872	1,300	142,181	13,850	.....	667,203	2.33
Sandwich	436,976	.....	80,514	6,615	†25,000	499,105	1.75
Tamworth	418,620	.....	97,488	455	.....	516,593	1.80
Tuftonborough	257,478	200	32,703	.....	.....	290,381	1.01
Wakefield	624,586	3,700	349,657	58,842	.....	1,036,785	3.65
Wolfeborough	1,088,413	3,700	283,298	45,464	*20,000	1,440,875	5.05
1902	\$6,371,747	\$9,900	\$1,457,319	\$229,509	*\$31,869	\$8,100,344	\$28.34
1898	6,266,956	.....	.....	.....	.....	.....	.....
Gain	\$104,791	.....	.....	.....	.....	.....	.....

* Increase. † Decrease.

MERRIMACK COUNTY.

VALUATION AND TAXATION.

93

Allenstown	\$653,271	\$1,000	\$104,874	\$16,155	.....	\$775,300	\$2.71
Andover	456,315	600	149,426	97,155	.....	703,496	2.46
Boscawen	651,765	.....	185,739	37,201	†\$10,000	864,705	3.03
Bow	310,080	.....	196,460	19,567	*\$25,000	551,107	1.93
Bradford	430,810	1,500	244,880	27,451	†15,000	689,641	2.41
Canterbury	463,220	.....	197,557	17,870	.....	678,647	2.37
Chichester	287,197	.....	173,833	38,041	†10,000	489,071	1.72
Concord	11,394,218	144,720	4,941,067	2,723,051	*\$300,000	19,503,056	68.26
Danbury	216,906	.....	150,715	12,100	*10,000	389,721	1.36
Dunbarton	294,246	.....	195,468	17,169	.....	506,883	1.77
Epsom	334,580	2,600	168,992	15,784	.....	521,956	1.82
Franklin	2,695,891	9,500	1,010,867	546,672	.....	4,262,930	14.92
Henniker	710,546	.....	333,030	22,400	.....	1,065,976	3.73
Hill	189,930	.....	66,039	7,262	.....	263,231	.92
Hooksett	700,579	18,300	255,063	44,147	*10,000	1,028,089	3.60
Hopkinton	912,717	4,100	484,859	31,060	†50,000	1,383,336	4.84
Loudon	489,888	.....	342,756	14,368	.....	847,012	2.96
Newbury	299,006	.....	118,694	5,690	*\$30,000	453,390	1.59
New London	415,987	1,500	153,481	15,668	*\$30,000	616,636	2.16
Northfield	619,316	.....	154,715	13,720	.....	787,751	2.76
Pembroke	1,196,872	11,600	502,479	29,227	.....	1,740,178	6.09
Pittsfield	1,145,720	2,200	384,157	41,257	.....	1,573,334	5.50
Salisbury	255,985	.....	123,698	1,254	.....	375,937	1.31
Sutton	341,896	.....	130,037	5,414	†5,000	447,347	1.56
Warner	662,364	4,400	338,301	84,651	†30,000	1,089,806	3.82
Webster	261,131	1,000	207,891	14,316	.....	479,338	1.68
Wilnot	214,448	500	144,571	5,544	†22,000	343,063	1.20
1902	\$26,604,884	\$203,520	\$11,459,739	\$3,904,794	*\$255,000	\$42,430,937	\$148.48
1898	25,857,287						
Gain	\$747,597						

* Increase. † Decrease.

TABLE No. 2.—*Continued.*
HILLSBOROUGH COUNTY.

Towns.	Amount of inventory.	Insurance stock.	Deposits in savings banks.	Railroad stock, right of way, and buildings.	Increase and decrease by board.	Equalized valuation.	Proportion to each \$1,000 of state tax.
Amherst.....	\$649,875	\$1,100	\$149,087	\$21,364	†\$25,000	\$796,426	\$2.80
Antrim.....	663,467	4,000	258,214	6,516	.....	932,197	3.26
Bedford.....	635,369	7,700	250,626	3,639	*30,000	927,334	3.24
Bennington.....	253,786	.....	51,813	6,905	†25,000	287,504	1.00
Brookline.....	281,479	.....	34,469	9,443	†50,000	275,391	.97
Deering.....	204,602	.....	85,420	969	†30,000	260,991	.92
Francesstown.....	329,126	8,900	109,235	6,144	†25,000	428,405	1.50
Goffstown.....	1,216,922	4,500	628,780	30,965	*25,000	1,906,167	6.66
Greenville.....	258,504	1,300	57,413	22,608	.....	339,825	1.19
Hancock.....	638,011	6,000	87,629	13,816	*50,000	795,456	2.78
Hillsborough.....	349,776	.....	117,973	8,759	†25,000	451,508	1.58
Hollis.....	1,206,552	400	423,685	11,932	*50,000	1,692,569	5.92
Hudson.....	555,460	10,000	38,531	16,645	†5,000	615,636	2.16
Litchfield.....	698,905	3,600	98,796	34,462	*25,000	860,763	3.01
Lyndeborough.....	214,086	.....	104,496	6,138	.....	324,720	1.13
	293,528	.....	18,540	9,074	†20,000	301,142	1.05

Manchester	33,044,334	421,000	9,097,530	2,405,919	*500,000	45,468,783	159.10
Mason.	229,382	.....	34,580	5,405	†10,000	259,367	.91
Merrimack	657,537	.....	220,376	61,405	*25,000	964,318	3.37
Milford	2,035,483	35,150	236,276	109,017	.....	2,415,926	8.47
Mont Vernon . . .	315,494	.....	8,637	3,153	†26,000	301,284	1.05
Nashua	14,215,851	164,800	1,334,213	805,341	*100,000	16,620,205	58.16
New Boston	606,593	1,000	336,368	3,271	.....	947,232	3.31
New Ipswich	511,015	.....	108,883	42,132	*15,000	677,030	2.37
Pelham	473,330	.....	9,722	10,396	.....	493,448	1.72
Peterborough	1,457,874	44,200	475,270	46,249	.....	2,023,593	7.08
Sharon	72,547	.....	6,797	.....	†15,000	64,344	.22
Temple	193,522	.....	29,192	.....	†25,000	197,714	.69
Weare ..	708,325	4,000	422,662	12,887	†25,000	1,122,874	3.92
Wilton	962,840	7,400	112,273	116,036	*45,000	1,243,549	4.36
Windsor	29,404	.....	10,860	.....	†9,404	30,860	.10
	\$63,962,979	\$725,050	\$14,958,346	\$3,830,590	*\$549,596	\$84,026,561	\$294.00
1902							
1898	61,130,965						
Gain.	\$2,832,014						

* Increase. † Decrease.

TABLE No. 2.—Continued.

CHESHIRE COUNTY.

TOWNS.	Amount of inventory.	Insurance stock.	Deposits in savings banks.	Railroad stock and right of way and buildings.	Increase and decrease by board.	Equalized valuation.	Proportion to each \$1,000 of state tax.
Alstead	\$480,275	.. . . .	\$45,383	\$120	†20,000	\$505,778	\$1.77
Chesterfield.	614,204	.. . . .	30,540	25	.. . . .	644,769	2.29
Dublin	809,045	.. . . .	104,029	280	.. . . .	913,354	3.20
Fitzwilliam.	512,156	.. . . .	22,471	8,080	.. . . .	542,707	1.91
Gilsum.	239,736	.. . . .	30,061	102	†20,000	249,899	.88
Harrisville	360,472	.. . . .	30,364	4,268	.. . . .	395,104	1.38
Hinsdale.	1,029,254	\$1,000	18,986	5,000	.. . . .	1,054,240	3.70
Jaffrey.	952,800	2,000	232,028	11,281	.. . . .	1,198,109	4.15
Keene.	6,788,116	85,500	531,168	330,680	.. . . .	7,735,464	27.07
Marlow	718,958	1,500	62,646	6,025	*60,000	849,129	2.97
Marlborough	241,164	500	53,980	67	†12,000	283,711	1.00
Nelson	142,808	.. . . .	13,550	95	.. . . .	156,453	.54
Richmond	299,082	.. . . .	14,786	.. . . .	.. . . .	313,868	1.09
Rindge.	518,791	.. . . .	161,501	2,910	.. . . .	683,202	2.39
Roxbury.	86,312	.. . . .	6,497	200	†5,000	88,009	.30
Stoddard.	183,182	.. . . .	21,363	50	†10,000	194,595	.68

Sullivan	126,727	.....	24,203	.....	.....	145,930	.51
Surry	171,484	.....	23,018	.....	414	194,916	.68
Swanzy	763,461	.....	49,041	.....	10,548	823,050	2.89
Troy	585,191	.....	28,647	.....	6,325	620,163	2.13
Walpole	1,561,340	.....	173,598	.....	37,489	1,772,427	6.21
Westmoreland	468,056	.....	63,673	.....	8,225	539,954	1.89
Winchester	1,170,789	600	16,252	.....	12,530	1,200,171	4.21
1902	\$18,823,403	\$91,100	\$1,757,785	\$144,714	+\$12,000	\$21,105,002	\$73.84
1898	17,979,702						
Gain.	\$843,701						

* Increase.
† Decrease.

* Increase.

† Decrease.

TABLE No. 2.—Continued.

SULLIVAN COUNTY.

TOWNS.	Amount of inven- tory.	Insurance stock.	Deposits in s a v- ings banks.	Railroad stock, right of way and buildings.	Increase and de- crease by board.	Equalized val u a- tion.	Proportion to each \$1,000 of state tax.
Acworth.....	\$275,042	\$2,200	\$28,532	\$820	†\$27,000	\$279,594	\$0.98
Charlestown.....	907,970	.....	4,084	19,038	†7,970	923,122	3.23
Claremont.....	3,329,500	1,500	91,993	38,439	*210,000	3,671,432	12.85
Cornish.....	541,162	.....	9,025	1,935	.....	552,122	1.93
Croydon.....	202,446	.....	20,226	40	†15,000	207,712	.72
Goshen.....	140,916	.....	36,794	435	†10,000	168,145	.58
Grantham.....	145,486	.....	17,142	4,836	†10,000	157,464	.55
Langdon.....	208,698	.....	13,923	.....	†20,000	202,621	.71
Lempster.....	162,936	.....	20,294	1,457	†30,000	154,687	.54
Newport.....	1,535,220	14,700	364,517	220,090	*110,000	2,244,527	7.86
Plainfield.....	517,800	.....	37,858	5,551	.....	561,209	1.96
Springfield.....	152,469	.....	20,296	228	.....	172,993	.60
Sunapee.....	560,330	.....	89,209	10,995	.....	660,534	2.31
Unity.....	222,317	.....	11,586	.....	†25,000	208,903	.73
Washington.....	243,246	.....	63,226	45	†25,000	281,517	1.00
1902.....	\$9,145,538	\$18,400	\$828,705	\$303,909	*\$150,030	\$10,446,582	\$36.55
1898.....	8,641,991						
Gain.....	\$503,547						

* Increase. † Decrease.

GRAFTON COUNTY.

Alexandria.....	\$205,636	.....	\$79,555	\$1,936	†\$5,636	\$281,491	\$9.99
Ashland.....	600,761	\$500	92,640	7,404	†25,000	675,365	2.36
Bath.....	398,834	.....	77,962	8,152	*50,000	534,948	1.87
Benton.....	115,028	.....	13,430	1,385	*10,000	139,843	.49
Bethlehem.....	704,387	.....	136,143	32,412	.....	872,942	3.05
Bridgewater.....	108,504	.....	49,016	1,950	†10,000	149,470	.52
Bristol.....	789,281	2,600	318,691	26,327	.....	1,166,899	4.09
Campton.....	401,116	.....	114,225	12,075	.....	527,416	1.84
Canaan.....	555,159	100	93,246	47,853	.....	696,358	2.44
Dorchester.....	98,618	.....	20,122	.....	.....	103,740	.36
Easton.....	92,307	.....	54,935	.....	.....	147,242	.51
Ellsworth.....	24,321	.....	1,736	.....	.....	21,736	.08
Enfield.....	645,445	200	188,059	75,931	.....	939,635	3.28
Franconia.....	424,833	.....	74,836	10,141	.....	509,810	1.78
Grafton.....	274,368	.....	155,079	10,421	.....	434,868	1.52
Groton.....	101,350	.....	26,023	.....	.....	122,373	.42
Hanover.....	1,252,722	6,100	259,873	50,448	.....	1,569,143	5.48
Haverhill.....	1,272,439	.....	260,236	76,974	*75,000	1,684,649	5.88
Hebron.....	95,052	.....	47,861	75	.....	127,988	.44
Holderness.....	310,634	.....	51,134	25,406	.....	387,174	1.39
Landaff.....	239,374	.....	77,169	1,219	.....	307,762	1.08
Lebanon.....	2,591,056	.....	328,486	117,648	.....	3,041,290	10.64
Lincoln.....	315,422	4,100	44,609	2,102	.....	547,133	1.91
Lisbon.....	1,188,992	.....	292,377	11,511	*185,000	1,492,880	5.22
Littleton.....	1,683,410	.....	621,231	20,203	.....	2,324,844	8.13

TABLE No. 2.—Continued.
GRAFTON COUNTY.—Continued.

TOWNS.	Amount of inventory.	Insurance stock.	Deposits in savings banks.	Railroad stock, right of way and buildings.	Increase and decrease by board.	Equalized valuation.	Proportion to each \$1,000 of state tax.
Livermore	\$126,040	.....	\$2,577	.....	*\$73,960	\$202,577	\$0.71
Lyman	178,632	.....	20,561	.....	†10,000	189,193	.66
Lyme	485,927	\$100	108,068	\$2,034	.....	596,129	2.08
Mouroe	279,028	.....	8,121	.....	†10,000	277,149	.99
Orange	64,193	.....	9,557	1,020	†4,193	70,577	.24
Orford	393,876	.....	22,913	485	.....	417,274	1.49
Piermont	348,735	.....	18,176	.....	.....	366,911	1.28
Plymouth	861,482	13,400	398,229	134,030	*50,000	1,457,141	5.10
Rumney	305,596	2,000	198,227	11,826	.....	517,649	1.81
Thornton	186,500	.....	23,034	5,210	.....	214,744	.75
Warren	342,810	.....	98,979	29,809	.....	421,598	1.48
Waterville	149,095	.....	1,100	.....	†50,000	201,100	.70
Wentworth	208,366	.....	83,816	24,143	*50,905	316,325	1.10
Woodstock.....	219,278	900	22,960	15,449	*20,000	278,587	.98
1902	\$18,638,607	\$30,000	\$4,524,992	\$765,579	*\$374,715	\$24,333,893	\$85.14
1898	18,067,955						
Gain.....	\$570,652						

* Increase. † Decrease.

COOS COUNTY.

VALUATION AND TAXATION.

101

Berlin	\$3,275,566	.....	\$241,811	\$6,605	.....	\$3,523,982	\$12.34
Carroll	289,980	.....	35,506	22,163	*\$310,020	657,669	2.30
Clarksville	146,244	.....	2,908	.....	*10,000	159,152	.55
Colebrook	910,628	\$300	132,336	11,724	.....	1,054,988	3.69
Columbia	313,496	.....	20,327	4,512	*24,000	362,335	1.27
Dalton	171,501	.....	28,955	6,596	†25,000	182,052	.64
Dummer	156,956	.....	4,783	491	.....	162,230	.56
Errol	167,507	.....	1,136	.....	*32,493	201,136	.71
Gorham	538,788	200	126,522	24,292	.....	689,802	2.42
Jefferson	360,762	400	68,568	6,200	*100,000	535,930	1.89
Lancaster	1,493,669	9,460	588,083	22,277	.....	2,113,489	7.40
Milan	390,484	.....	50,600	3,453	.....	444,537	1.55
Northumberland	774,238	.....	123,186	42,459	.....	939,883	3.28
Pittsburg	461,315	.....	7,547	.....	*238,685	707,547	2.47
Randolph	92,004	.....	8,466	.....	*7,996	108,466	.38
Shelburne	151,014	.....	26,905	7,133	.....	185,052	.64
Stark	258,778	.....	65,212	5,647	*16,000	345,637	1.21
Stewartstown	427,451	.....	32,640	5,461	.....	465,552	1.62
Stratford	403,202	.....	107,294	37,648	.....	548,144	1.92
Wentworth's Loc'u	59,865	.....	549	.....	.....	60,414	.21
Whitefield	749,949	.....	221,175	35,615	†100,000	906,739	3.17
1902	\$11,593,397	\$10,360	\$1,894,509	\$242,276	*\$614,194	\$14,354,736	\$50.22
1898	10,163,741	.....	.....	.....	.....	.....	.....
Gain	\$1,429,656	.....	.....	.....	.....	1,913,000	6.70
Total valuation of unincorporated places .....	.....	.....	.....	.....	.....	\$16,267,736	\$56.92

* Increase. † Decrease.

TABLE No. 2.— *Continued.**Unincorporated places in Coos County.*

	Valuation, 1898.	Equalized valuation, 1902.	Proportion to each \$1,000 of state tax.
Bean's Grant	\$7,000	\$10,000	20 .03
Bean's Purchase	140,000	150,000	.50
Cambridge	150,000	250,000	.90
Chandler's Purchase	3,000	3,000	.01
Crawford's Purchase	25,000	25,000	.09
Cutt's Grant	20,000	10,000	.03
Dixville	160,000	200,000	.69
Dix's Grant	35,000	70,000	.24
Erving's Grant	20,000	30,000	.10
Green's Grant	20,000	20,000	.08
Gilmanton and Atkinson Academy Grant.	80,000	150,000	.50
Hadley's Purchase.	10,000	10,000	.03
Kilkenny	85,000	75,000	.26
Low and Burbank's Grants ...	80,000	100,000	.40
Martin's Location	5,000	5,000	.02
Millsfield	150,000	250,000	.88
Odell	150,000	125,000	.45
Pinkham's Grant	10,000	10,000	.03
Sargent's Purchase	165,000	165,000	.57
Second College Grant	125,000	125,000	.45
Success	100,000	60,000	.20
Thompson and Meserve's Purchase	50,000	70,000	.24
Total	\$1,590,000	\$1,913,000	\$6.70

TABLE No. 2.—Continued.
SUMMARY.

COUNTIES.	Amount of inven- tory.	Insurance stock.	Deposits in sav- ings banks.	Railroad stock, right of way, and buildings.	Increase and de- crease by board.	Equalized valua- tion.	Proportion to each \$1,000 of state tax.
Rockingham	\$27,556,401	\$211,400	\$7,221,581	\$1,470,277	*139,821	\$36,599,480	\$128.06
Strafford	20,958,814	25,800	7,274,530	892,701	*165,739	29,317,584	102.58
Belknap	9,496,925	42,000	3,094,983	595,187	†50,000	13,178,795	46.09
Carroll	6,371,747	9,900	1,457,319	229,509	*31,869	8,100,344	28.34
Merrimack	26,604,884	203,520	11,459,739	3,904,794	*258,000	42,430,937	148.48
Hillsborough	63,962,979	725,050	14,958,346	3,830,590	*549,596	84,026,561	294.00
Cheshire	18,823,403	91,100	1,757,785	444,714	†12,000	21,105,002	73.84
Sullivan	9,145,538	18,400	828,705	303,909	*150,030	10,446,582	36.55
Grafton	18,638,607	30,000	4,524,992	765,579	*374,715	24,333,893	85.14
Coös	11,593,397	10,360	1,894,509	242,276	*614,194	†16,267,736	56.92
Unincorporated places . . . . .	.....	.....	.....	.....	*323,000	.....	.....
Total	\$213,152,695	\$1,367,530	\$54,472,189	\$12,679,536	*\$2,544,964	\$285,806,914	\$1,000.00

* Increase.

† Decrease.

‡ Includes unincorporated places.

TABLE NO. 3.

New Apportionment of State Tax compared with
Apportionments of 1879 and later. Proportion
to each \$1,000 of State Tax.

TABLE No. 3.

New apportionment of state tax compared with apportionments of 1879 and later. Proportion to each \$1,000 of state tax.

ROCKINGHAM COUNTY.

TOWNS.	1879	1883	1887	1891	1895	1899	1903
Atkinson.....	\$1.78	\$1.57	\$1.38	\$1.29	\$1.23	\$1.29	\$1.20
Auburn.....	1.68	1.54	1.49	1.42	1.46	1.58	1.73
Brentwood.....	1.87	1.76	1.54	1.44	1.41	1.28	1.22
Candia.....	2.70	2.63	2.44	2.36	2.16	2.14	2.18
Chester.....	2.54	2.55	2.36	2.15	1.87	1.81	1.89
Danville.....	1.17	1.00	1.01	.92	.92	.77	.82
Deerfield.....	2.96	2.91	3.00	2.87	2.61	2.43	2.34
Derry.....	4.51	4.64	4.74	5.05	5.39	5.97	6.63
East Kingston.....	1.42	1.22	1.07	.99	.90	.91	.90
Epping.....	3.69	3.50	3.45	3.38	3.22	3.10	2.94
Exeter.....	13.78	14.32	13.22	12.79	13.45	14.65	13.30
Fremont.....	1.17	1.27	1.20	1.20	1.16	1.09	1.11
Greenland.....	2.40	2.35	2.23	1.99	1.87	1.88	1.90
Hampstead.....	2.52	2.10	2.20	1.93	1.83	1.78	1.59
Hampton.....	3.67	3.16	3.04	2.84	2.49	2.64	3.09
Hampton Falls.....	1.62	1.48	1.47	1.32	1.24	1.24	1.15
Kensington.....	1.58	1.45	1.28	1.20	1.08	1.02	.96
Kingston.....	2.13	2.07	1.70	1.64	1.41	1.31	1.28
Londonderry.....	3.93	3.80	3.73	3.36	2.93	2.92	2.95
Newcastle.....	.80	.82	.90	1.00	1.13	1.12	1.51
Newfields.....	2.16	2.41	2.21	2.38	1.71	1.42	1.15
Newington.....	1.25	1.14	1.16	1.09	1.09	1.13	1.16
Newmarket.....	6.02	5.70	5.42	5.60	5.10	5.32	5.23
Newton.....	1.92	1.64	1.59	1.55	1.37	1.31	1.33
North Hampton.....	2.62	2.83	2.94	2.78	2.66	2.71	3.07
Northwood.....	2.90	2.79	2.81	2.87	2.64	2.49	2.42
Nottingham.....	2.33	2.04	1.93	1.85	1.49	1.39	1.39
Plaistow.....	2.33	1.42	1.27	1.38	1.29	1.27	1.27
Portsmouth.....	41.00	38.23	40.23	48.25	49.31	55.85	45.35
Raymond.....	2.08	1.93	1.86	1.89	1.92	2.03	2.25
Rye.....	3.54	3.86	3.89	3.90	3.67	3.91	4.17
Salem.....	3.16	2.75	2.68	2.55	2.61	2.63	2.88
Sandown.....	1.11	.87	.89	.83	.70	.65	.64
Seabrook.....	1.59	1.38	1.28	1.15	1.03	1.12	1.13
South Hampton.....	1.29	1.06	1.00	.89	.80	.73	.72
Stratham.....	3.41	3.21	2.91	2.62	2.41	2.12	1.86
Windham.....	2.18	1.81	1.85	1.67	1.51	1.41	1.35
Totals.....	\$138.81	\$131.21	\$129.37	\$134.39	\$131.07	\$138.42	\$128.06

TABLE No. 3.—*Continued.*

STRAFFORD COUNTY.

TOWNS.	1879	1883	1887	1891	1895	1899	1903
Barrington.....	\$3.39	\$3.35	\$3.08	\$2.74	\$2.41	\$2.29	\$2.13
Dover.....	44.15	46.75	45.38	45.05	42.41	42.19	42.08
Durham.....	4.10	3.80	3.46	3.22	2.75	2.88	2.86
Farmington.....	6.43	6.87	8.40	8.04	6.22	5.44	5.27
Lee.....	2.20	2.22	2.09	1.87	1.61	1.49	1.41
Madbury.....	1.57	1.66	1.66	1.52	1.42	1.32	1.33
Middleton.....	.67	.58	.61	.61	.53	.39	.41
Milton.....	3.00	2.79	2.91	3.27	3.09	3.18	3.58
New Durham.....	1.40	1.36	1.21	1.24	1.04	.84	.87
Rochester.....	15.06	15.73	16.99	17.42	18.40	19.52	20.31
Rollinsford.....	6.48	6.44	6.50	6.12	5.70	5.38	5.50
Somersworth.....	14.83	14.40	14.77	14.23	13.84	14.34	14.59
Strafford.....	3.04	2.87	2.69	2.47	2.33	2.20	2.24
Totals.....	\$106.32	\$108.82	\$109.75	\$107.80	\$101.75	\$101.46	\$102.58

TABLE No. 3.—*Continued.*

BELKNAP COUNTY.

TOWNS.	1879	1883	1887	1891	1895	1899	1903
Alton	\$3.40	\$3.03	\$3.00	\$2.93	\$2.90	\$2.68	\$2.71
Barnstead	3.04	3.04	2.67	2.66	2.65	2.26	2.42
Belmont	2.85	2.85	2.87	2.80	2.53	2.42	2.50
Center Harbor	1.03	1.26	1.30	1.24	1.22	1.20	1.24
Gilford	6.46	6.85	7.18	7.33	1.77	1.71	1.78
Gilmanton	3.11	2.86	2.80	2.87	2.54	2.32	2.13
Laconia	9.86	11.37	12.60	12.94	22.52	21.32	20.53
Meredith	3.97	4.27	4.24	3.91	3.70	3.43	3.77
New Hampton	1.94	1.85	1.85	1.70	1.64	1.52	1.49
Sanbornton	2.86	2.92	2.78	2.40	2.28	2.10	2.07
Tilton	3.06	3.68	4.29	4.77	5.43	5.65	5.45
Totals	\$41.58	\$43.98	\$45.58	\$45.55	\$49.18	\$46.61	\$46.09

TABLE No. 3.— *Continued.*

CARROLL COUNTY.

Towns.	1879	1883	1887	1891	1895	1899	1903
Albany	\$0.45	\$0.48	\$0.36	\$0.41	\$0.27	\$0.24	\$0.37
Bartlett	1.45	1.28	1.25	1.26	1.31	1.59	1.41
Brookfield	1.00	.77	.72	.65	.60	.53	.53
Chatham .....	.60	.58	.44	.36	.32	.28	.43
Conway.....	3.61	3.77	3.55	3.53	3.62	3.62	4.21
Eaton .....	.75	.69	.62	.56	.50	.43	.44
Effingham	1.43	1.19	1.05	.92	.88	.80	.85
Freedom.....	1.56	1.47	1.44	1.57	1.14	1.02	.89
Hart's Location.....	.24	.15	.11	.12	.13	.14	.11
Jackson .....	.81	.84	.91	.94	.94	1.03	1.17
Madison.....	.84	.79	.78	.73	.77	.70	.76
Moultonborough.....	2.03	1.91	1.76	1.61	1.61	1.38	1.58
Ossipee	3.00	2.74	2.60	2.57	2.48	2.23	2.33
Sandwich	2.59	2.52	2.44	2.25	1.91	1.83	1.75
Tamworth	2.27	2.08	1.74	1.71	1.60	1.60	1.80
Tuftonborough	1.80	1.48	1.25	1.15	1.05	1.00	1.01
Wakefield.....	3.23	3.09	3.20	3.24	3.17	3.34	3.65
Wolfeborough.....	6.43	5.60	5.64	5.57	5.20	4.94	5.05
Hale's Location.....	.01	.....	.....	.....	.....	.....	.....
Totals	\$34.10	\$31.33	\$29.86	\$29.15	\$27.50	\$26.70	\$28.34

TABLE No. 3.—*Continued.*

MERRIMACK COUNTY.

TOWNS.	1879	1883	1887	1891	1895	1899	1903
Allenstown.....	\$3.81	\$4.00	\$3.32	\$3.01	\$2.79	\$2.59	\$2.71
Andover.....	3.31	2.96	2.78	2.62	2.38	2.23	2.46
Boscawen.....	5.14	4.09	3.72	3.57	3.02	2.81	3.03
Bow.....	2.60	2.39	2.36	2.48	2.35	1.94	1.93
Bradford.....	2.59	2.51	2.54	2.41	2.34	2.26	2.41
Canterbury.....	3.18	3.10	2.93	2.63	2.45	2.19	2.37
Chichester.....	1.95	1.75	1.81	1.81	1.88	1.89	1.72
Concord.....	63.44	63.44	62.97	63.30	69.41	72.27	68.26
Danbury.....	1.51	1.52	1.49	1.38	1.31	1.27	1.36
Dunbarton.....	2.91	2.64	2.49	2.26	1.92	1.77	1.77
Epsom.....	2.41	2.00	2.18	2.03	1.99	1.71	1.82
Franklin.....	9.13	11.39	12.01	12.67	15.06	15.37	14.92
Henniker.....	4.25	3.93	3.85	3.76	3.77	3.74	3.73
Hill.....	1.16	1.06	1.05	1.02	.88	1.07	.92
Hooksett.....	4.11	4.13	3.91	3.75	3.80	3.49	3.60
Hopkinton.....	6.51	6.19	5.77	5.42	4.71	4.72	4.84
Loudon.....	3.70	3.54	3.43	3.20	3.04	3.01	2.96
Newbury.....	1.50	1.58	1.46	1.50	1.36	1.37	1.59
New London.....	2.49	2.30	2.17	1.81	1.85	1.88	2.16
Northfield.....	2.50	2.58	2.53	2.53	2.35	2.41	2.76
Pembroke.....	6.80	7.68	6.39	6.15	5.86	5.69	6.09
Pittsfield.....	4.82	5.28	5.61	5.80	5.80	5.46	5.50
Salisbury.....	2.04	1.94	1.80	1.69	1.44	1.28	1.31
Sutton.....	2.26	2.12	2.01	1.84	1.72	1.56	1.56
Warner.....	5.26	4.70	4.32	3.91	4.09	3.86	3.82
Webster.....	2.23	1.97	1.88	1.74	1.79	1.71	1.68
Wilmot.....	1.73	1.66	1.54	1.50	1.30	1.22	1.20
Totals.....	\$153.34	\$152.45	\$148.32	\$145.79	\$150.66	\$150.77	\$148.48

TABLE No. 3.—*Continued.*

HILLSBOROUGH COUNTY.

TOWNS.	1879	1883	1887	1891	1895	1899	1903
Amherst.....	\$4.61	\$4.57	\$4.27	\$3.99	\$3.59	\$3.14	\$2.80
Antrim.....	2.90	2.93	3.19	3.07	2.90	2.97	3.26
Bedford.....	3.78	3.53	3.46	3.25	3.02	3.21	3.24
Bennington.....	1.25	1.20	1.24	1.32	1.27	1.10	1.00
Brookline.....	1.62	1.57	1.44	1.44	1.54	1.31	.97
Deering.....	1.38	1.40	1.13	1.12	.99	.97	.92
Francestown.....	2.88	2.71	2.65	2.51	2.08	1.83	1.50
Goffstown.....	6.44	6.62	6.73	6.60	6.12	6.51	6.66
Greenfield.....	1.97	1.64	1.63	1.64	1.48	1.28	1.19
Greenville.....	2.94	3.01	2.90	3.00	2.78	2.70	2.78
Hancock.....	2.15	1.98	1.96	1.92	1.85	1.59	1.58
Hillsborough.....	4.03	4.16	4.82	5.13	5.22	5.40	5.92
Hollis.....	4.30	4.06	3.81	3.52	2.85	2.46	2.16
Hudson.....	3.74	3.42	3.49	3.48	3.26	3.22	3.01
Litchfield.....	1.68	1.54	1.54	1.52	1.24	1.18	1.13
Lyndeborough....	1.51	1.47	1.46	1.42	1.23	1.14	1.05
Manchester.....	102.65	121.01	126.87	131.23	136.45	150.28	159.10
Mason.....	1.88	1.78	1.56	1.47	1.35	1.16	.91
Merrimack.....	3.89	3.67	3.70	3.41	3.36	3.37	3.37
Milford.....	9.60	10.10	10.22	10.29	9.87	9.34	8.47
Mont Vernon....	1.86	1.72	1.63	1.48	1.31	1.14	1.05
Nashua.....	49.72	53.51	57.00	58.43	60.62	60.81	58.16
New Boston.....	4.00	4.04	3.68	3.51	3.34	3.10	3.31
New Ipswich.....	3.68	3.07	2.81	2.62	2.23	2.08	2.37
Pelham.....	3.37	2.79	2.59	2.28	1.99	1.91	1.72
Peterborough....	8.32	8.41	8.20	8.46	7.70	6.64	7.08
Sharon.....	.43	.39	.36	.31	.31	.25	.22
Temple.....	1.17	1.08	1.04	.94	.85	.71	.69
Weare.....	5.27	5.21	4.59	4.25	3.66	3.63	3.92
Wilton.....	5.78	5.02	5.40	5.51	5.66	5.24	4.36
Windsor.....	.26	.25	.24	.20	.18	.12	.10
Totals.....	\$249.06	\$267.86	\$275.61	\$279.32	\$280.30	\$289.79	\$294.00

TABLE No. 3.— *Continued.*

CHESHIRE COUNTY.

TOWNS.	1879	1883	1887	1891	1895	1899	1903
Alstead.....	\$3.44	\$3.26	\$3.01	\$2.77	\$2.47	\$2.09	\$1.77
Chesterfield.....	3.00	3.30	3.27	3.16	2.85	2.50	2.29
Dublin.....	2.02	1.89	2.04	2.34	2.39	2.33	3.20
Fitzwilliam.....	2.95	2.81	2.81	2.72	2.52	2.01	1.91
Gilsum.....	1.74	1.93	1.88	1.66	1.62	1.29	.88
Harrisville.....	2.11	1.89	1.70	1.69	1.65	1.45	1.38
Hinsdale.....	4.80	4.75	5.00	4.96	4.40	4.04	3.70
Jaffrey.....	4.67	4.73	4.53	4.64	4.41	4.07	4.15
Keene.....	37.32	34.15	35.94	36.25	33.29	29.24	27.07
Marlborough.....	3.20	3.46	3.46	3.58	3.65	3.00	2.97
Marlow.....	2.46	2.25	2.35	2.37	2.02	1.46	1.00
Nelson.....	1.03	.86	.86	.88	.70	.57	.54
Richmond.....	1.52	1.47	1.33	1.21	1.04	.89	1.09
Rindge.....	2.97	2.93	2.92	2.84	2.70	2.46	2.39
Roxbury.....	.36	.33	.35	.38	.36	.33	.30
Stoddard.....	1.22	1.05	1.04	.99	.97	.78	.68
Sullivan.....	1.20	1.14	1.11	1.03	.74	.61	.51
Surry.....	1.01	1.06	.95	.84	.83	.74	.68
Swanzey.....	4.43	4.24	4.29	4.17	3.96	3.43	2.89
Troy.....	2.33	2.21	2.11	2.19	2.29	2.06	2.13
Walpole.....	7.66	7.41	7.08	7.43	6.76	6.26	6.21
Westmoreland.....	4.41	3.89	3.38	2.90	2.66	2.07	1.89
Winchester.....	6.77	6.45	6.97	6.90	6.21	5.06	4.21
Totals.....	\$102.62	\$97.46	\$98.38	\$97.90	\$90.49	\$78.74	\$73.84

TABLE No. 3.—*Continued.*

SULLIVAN COUNTY.

TOWNS.	1879	1883	1887	1891	1895	1899	1903
Acworth.....	\$2.37	\$2.19	\$2.06	\$1.89	\$1.54	\$1.16	\$0.98
Charlestown	6.37	5.27	4.68	4.53	4.33	3.40	3.23
Claremont.	14.21	13.71	13.25	13.65	14.79	13.48	12.85
Cornish.....	3.40	2.99	2.49	2.15	1.97	1.86	1.93
Croydon.....	1.40	1.17	1.02	.91	.89	.77	.72
Goshen.....	1.08	.95	.86	.78	.72	.60	.58
Grantham ..	1.03	.86	.77	.72	.66	.54	.55
Langdon.....	1.55	1.51	1.47	1.26	1.13	.87	.71
Lempster.....	1.38	1.28	1.18	.93	.93	.65	.54
Newport ..	7.63	8.14	7.87	7.97	9.05	8.38	7.86
Plainfield.....	3.46	3.03	2.83	2.57	2.41	1.98	1.96
Springfield	1.11	.90	.86	.76	.68	.57	.60
Sunapee.....	1.57	1.61	1.48	1.61	1.83	1.91	2.31
Unity	1.80	1.59	1.49	1.25	1.01	.86	.73
Washington.....	1.92	1.68	1.69	1.46	1.32	1.05	1.00
Totals	\$50.28	\$46.88	\$44.00	\$42.44	\$43.26	\$38.08	\$36.55

TABLE No. 3.—*Continued.*

GRAFTON COUNTY.

TOWNS.	1879	1883	1887	1891	1895	1899	1903
Alexandria.....	\$1.22	\$1.20	\$1.22	\$1.11	\$1.01	\$0.99	\$0.99
Ashland.....	2.22	2.35	2.30	2.18	2.30	2.50	2.36
Bath.....	2.90	2.54	2.44	2.21	2.01	1.79	1.87
Benton.....	.58	.53	.45	.39	.46	.43	.49
Bethlehem.....	2.76	2.98	3.14	3.16	3.16	3.05	3.05
Bridgewater.....	.78	.69	.63	.64	.57	.54	.52
Bristol.....	3.23	3.36	3.81	3.80	4.05	4.11	4.09
Campton.....	1.90	1.77	1.72	1.71	1.70	1.59	1.84
Canaan.....	3.48	2.98	2.82	2.64	2.58	2.60	2.44
Dorchester.....	.75	.69	.52	.48	.45	.37	.36
Easton.....	.63	.58	.52	.48	.53	.56	.51
Ellsworth.....	.18	.16	.17	.14	.11	.11	.08
Enfield.....	4.12	4.13	4.41	3.52	3.50	3.33	3.28
Franconia.....	1.29	1.43	1.61	1.65	1.62	1.60	1.78
Grafton.....	2.16	1.99	1.94	1.70	1.53	1.46	1.52
Groton.....	.74	.76	.71	.61	.53	.42	.42
Hanover.....	6.22	6.31	5.93	5.83	5.05	5.07	5.48
Haverhill.....	5.78	5.44	5.03	5.22	5.51	5.54	5.88
Hebron.....	.64	.58	.55	.44	.44	.46	.44
Holderness.....	1.29	1.13	1.15	1.03	.99	1.01	1.39
Landaff.....	1.30	1.16	1.14	1.14	1.11	1.02	1.08
Lebanon.....	11.52	11.79	10.97	11.20	11.91	11.36	10.64
Lincoln.....	.16	.23	.17	.24	.98	.98	1.91
Lisbon.....	4.72	4.39	4.50	4.51	4.35	4.71	5.22
Littleton.....	6.83	7.14	7.57	7.27	7.36	7.50	8.13
Livermore.....	.38	.26	.22	.27	1.27	1.27	.71
Lyman.....	1.14	.94	.92	.81	.72	.68	.66
Lyme.....	3.00	2.94	2.73	2.38	2.19	2.02	2.08
Monroe.....	1.30	1.14	1.29	1.01	1.03	1.11	.99
Orange.....	.50	.43	.35	.29	.28	.26	.24
Orford.....	2.81	2.49	2.15	1.88	1.58	1.48	1.49
Piermont.....	2.04	1.81	1.69	1.47	1.30	1.27	1.28
Plymouth.....	4.05	4.48	4.35	4.35	4.73	5.04	5.10
Rumney.....	1.95	1.95	1.84	1.63	1.64	1.64	1.81
Thornton.....	.97	.83	.82	.78	.75	.68	.75
Warren.....	1.57	1.62	1.66	1.61	1.53	1.41	1.48
Waterville.....	.12	.14	.13	.13	.52	.55	.70
Wentworth.....	1.50	1.34	1.19	1.14	1.12	1.04	1.10
Woodstock.....	.37	.35	.43	.77	.99	.79	.98
Totals.....	\$89.10	\$87.03	\$85.19	\$81.82	\$83.46	\$82.34	\$85.14

TABLE No. 3.—*Continued.*

COOS COUNTY.

TOWNS.	1879.	1883.	1887.	1891.	1895.	1899.	1903.
Berlin.....	\$1.25	\$1.53	\$2.68	\$3.75	\$6.54	\$9.62	\$12.34
Carroll.....	.95	1.17	1.28	1.27	1.11	1.26	2.30
Clarksville.....	.43	.44	.48	.46	.52	.51	.55
Colebrook.....	3.31	3.29	3.13	3.45	3.43	3.40	3.69
Columbia.....	1.35	1.26	1.15	1.09	.99	.96	1.27
Dalton.....	.93	.86	.75	.69	.63	.65	.64
Dummer.....	.41	.42	.45	.54	.46	.49	.56
Errol.....	.35	.36	.30	.40	.51	.52	.71
Gorham.....	1.63	1.99	2.10	1.97	1.95	2.13	2.42
Jefferson.....	1.35	1.27	1.27	1.23	1.18	1.23	1.89
Lancaster.....	5.41	5.47	5.65	6.24	6.97	7.05	7.40
Milan.....	1.06	1.14	1.06	1.07	1.12	1.20	1.55
Northumberland..	1.94	1.82	1.90	1.97	2.33	2.77	3.28
Pittsburg.....	.90	1.46	1.56	1.19	1.17	1.41	2.47
Randolph.....	.37	.35	.32	.26	.24	.26	.38
Shelburne.....	.53	.53	.56	.57	.55	.55	.64
Stark.....	1.05	1.11	1.11	1.11	1.16	1.04	1.21
Stewartstown....	1.53	1.52	1.54	1.45	1.41	1.40	1.62
Stratford.....	1.62	2.08	1.81	1.88	1.89	1.74	1.92
Wentw'orth's Loc'n .....		.08	.09	.11	.26	.23	.21
Whitefield.....	2.80	2.87	2.83	2.87	2.96	3.13	3.17
Unincorporated places	2.35	1.97	1.92	2.27	4.95	5.54	6.70
Totals.....	\$31.52	\$32.99	\$33.94	\$35.84	\$42.33	\$47.09	\$56.92

REPORT
OF THE
SUPERINTENDENT
OF
PUBLIC INSTRUCTION

BEING THE
FIFTY-SECOND REPORT UPON THE PUBLIC
SCHOOLS OF NEW HAMPSHIRE.

CONCORD, NEW HAMPSHIRE.

1902.

PRINTED BY IRA C. EVANS CO., CONCORD.

BOUND BY RUMFORD PRINTING CO., CONCORD.

REPORT.

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION,

CONCORD, N. H., October 1, 1902.

To His Excellency Chester B. Jordan, Governor of New Hampshire:

SIR,—I have the honor to transmit through you to the general court of New Hampshire the fifty-second report upon the schools of the state, being the fourth biennial report, and the thirty-first report since the establishment of this office.

The report includes:

1. Report of the trustees of the State Normal School.
2. Report of the proceedings of the State Teachers' Association for 1901.
3. Regulations governing state examination and certification of teachers.
4. Questions submitted at teachers' examinations in 1901 and 1902.
5. Appointments of superintendent for 1901 and 1902.
6. Institute statistics.
7. List of school officers.
8. List of institutions of a higher grade.
9. Statistics of the public schools for 1901 and 1902.
10. Recommendations, suggestions, etc.
11. Report of the regent of the state boards of medical examiners.

REPORT OF THE TRUSTEES OF THE NORMAL SCHOOL.

To the Honorable Senate and House of Representatives :

GENTLEMEN, — The Trustees of the New Hampshire Normal School beg to submit the following report :

It is a matter of sincere congratulation that New Hampshire's one Normal School is led by a man of rare excellence as an instructor, administrator, and organizer. Mr. Klock's native gifts, a kindliness of heart, a graciousness of speech and manner, an ability to read human nature and to rightly interpret human motives, combined with the power of a cultured mind and long experience as an instructor and superintendent, make him a strong man in his profession and a very serviceable man for the state.

During the two years that Mr. Klock has been at the head of our school his administration has been a most pronounced success, and it is conceded by all who have taken the pains to inform themselves, that the school is on a better footing, and promises better for the future, than at any time since its organization.

REPAIRS.

During the past two years the wood-work of the school buildings has been painted inside and out, the rooms kalso-mined, and much of the furniture and carpets replaced, at an expense of about \$1,100.00. These buildings are now in fairly good condition, and no large expenditures are anticipated for the near future.

An electric clock has been placed in Livermore Hall at an expense of \$238.00. This is found to be an absolute necessity and could not now be dispensed with.

Two rooms have been divided by temporary partitions, thereby giving additional room for normal work.

In 1901 rooms in the Kidder building on Main street were leased at an annual rental of \$275.00 for the use of the high school. Normal building is now, for the first time since its construction, devoted exclusively to normal work. Kindergarten material has been purchased for the primary grade; tables and chairs have displaced the old seats, and supplementary reading has been provided for all the grades.

VENTILATION.

The heating plant installed in 1900 gives entire satisfaction, and when in use the ventilating fan, driven by steam from the boilers, does its work well, and the air in the school-rooms is reasonably pure. When the weather is so mild that the large boilers are not needed for heating purposes, there is need of a small engine, of about five horse power, to drive the fan. An engine suitable for such work would probably cost about \$325.00. It is estimated that from 500 to 600 pounds of coal are consumed by the large boilers daily to drive the fan alone.

For about three months of the school year the large boilers are not needed for heating purposes. During this time the small engine could operate the fan at a probable saving of at least one half the expense of operating the large boilers. At present rates the saving in coal alone would soon pay for the engine needed.

DORMITORIES.

There is need of additional dormitory room. Normal Hall has twenty-eight rooms and can accommodate fifty-six persons. After the help has been provided for, there are accommodations for only forty-eight pupils. The present school year opened with an enrollment of upwards of one hundred. Normal Hall is full to overflowing, and many pupils have been obliged to seek entertainment outside. There is no reasonable doubt, that within the next ten years, as the excellent work done in this school becomes better known throughout the state, the attendance will so largely increase that twice the room now available will be needed.

It is very necessary that the young people who attend this school be under the immediate supervision of the principal and his trained assistants, when the school is not in session as well as when it is. The state proposes to furnish its common schools with teachers trained in the art of teaching. That training will be imperfect and incomplete unless it includes refinement, charm of personality, that peculiar "all-round graciousness" which comes from living in refined and cultured society. In order to become fully equipped the teacher must come in contact with living, breathing ideals. The true end of education is not knowledge, merely, but culture; it is the development of character into a strong, pure, and noble manhood and womanhood. This may be acquired, in a measure, from books and class-room talks, but more perfectly, more naturally, by association. The obligation of the state has not been discharged when it has provided merely for the mental development of the pupils who accept its bounty. It is equally responsible for the moral, social, and æsthetic conditions of every pupil entrusted to its care. These are important factors in the subsequent work of the pupil, and they cannot be ignored or overlooked. There can be no equivalent substitute.

LAUNDRY AND VEGETABLE CELLAR.

There is also most urgent need of a laundry, a drying house, and a cellar for storing vegetables. At present a room in the basement of Normal Hall is used for a laundry. This arrangement is both inconvenient and unsanitary. In damp weather the "clothes" are hung to dry in close proximity to the coal cellar and vegetable rooms, thereby obstructing the passages and rendering the labors of the employees more arduous and unpleasant.

There is no suitable place for storing vegetables for winter use. All the room now available for that purpose is in close proximity to the furnace, and a temperature conducive for the preservation of vegetables cannot be maintained.

The result is that vegetables must be purchased in small quantities, as they are needed for the table, and exorbitant prices paid, thus greatly enhancing the expense and labor.

It is the opinion of the board that a laundry and drying room, suitable for the increasing needs of the school, should be constructed upon ground owned by the state, and equipped with all modern appliances. Under this building should be constructed a cellar for storing and preserving vegetables for winter use. Nothing further need be said on this point. The needs of the school are so urgent that any argument would be superfluous.

APPROPRIATION.

The present annual allowance, at the disposal of the Trustees for the salaries of the normal and high school teachers, including that of the principal, is \$12,500. This sum is quite inadequate to secure to the state a continuance of that high grade of service that is so desirable and necessary. Like all other purchasable commodities, the skill, tact, and general ability of the teacher are worth just what they will bring in the open market. Experience shows that whenever a teacher, by reason of superior native ability or unusual skill, rises ever so little above the ordinary, a better position with a corresponding increase of salary is offered. This is right, and as it should be; it is a proper and healthy stimulant; it elevates the profession and tends to attract to it better minds and more consecrated effort. But it is not creditable to the state of New Hampshire that her one normal school is unable to retain teachers of recognized ability by reason of the greater inducements offered by schools and superintendencies of other states.

The amount appropriated by Massachusetts for the support of her ten normal schools in 1901 was \$299,341.07, an average for each school of \$29,934.10, and for each individual of the state of 10 6-10 cents. New Hampshire appropriated in 1901 for the support of her one normal school \$15,000, an average for each individual of the state of 3 6-10 cents.

Massachusetts is justly proud of her schools and she maintains them at a high standard of excellence. New Hampshire is fully able to place her schools upon an equally creditable basis.

RECOMMENDATIONS.

We therefore beg to make the following recommendations for the consideration of your honorable bodies :

1. That the annual appropriation for the maintenance of the Normal School be twenty-five thousand dollars.
2. That a small engine, to secure more perfect ventilation, be provided.
3. That steps be taken to provide additional dormitory room.
4. That a laundry, with suitable equipment, a drying house, and a vegetable cellar be constructed.

We beg further to recommend that the law regulating the appointment, and tenure of office, of the trustees be so modified that one shall be appointed and one retire annually, and that they shall hold office for the full term of five years.

All of which is very respectfully submitted.

HENRY H. CLARK,
For the Board.

REPORTS OF THE TREASURER OF THE NORMAL SCHOOL.

To the Trustees of the New Hampshire State Normal School:

GENTLEMEN,—I herewith submit my report as treasurer for the year ending August 31, 1901:

RECEIPTS.

Cash on hand September 1, 1900	.	\$1,292.97
Received of state treasurer	.	10,625.00
of Plymouth school district	.	3,300.00
of Plymouth school district (for		
books)	.	313.20
for fuel at Normal Hall	.	393.24
for tuitions in model schools	.	408.00
Balance due treasurer	.	119.53
		<hr/> \$16,451.94

DISBURSEMENTS.

Paid for salaries	.	\$11,680.00
repairs	.	336.87
books and supplies	.	1,238.44
lighting and water	.	165.25
advertising and printing	.	28.34
furniture and apparatus	.	433.66
fuel (including freight and cart-		
age)	.	2,148.59
insurance	.	137.50
miscellaneous expenses	.	283.29
		<hr/> \$16,451.94

GEORGE H. ADAMS,
Treasurer.

PLYMOUTH, September 2, 1901.

I have this day examined the above account and find the items properly vouched and the account correctly cast.

JAMES C. SIMPSON,
Auditor.

To the Trustees of the New Hampshire State Normal School:

GENTLEMEN,—I herewith submit my report as treasurer for the year ending August 31, 1902:

RECEIPTS.

Cash of state treasurer	\$14,583.37
for desks	40.00
for mimeograph	10.00
for tuitions in model schools	870.00
of Plymouth school district	3,300.00
	<hr/> \$18,803.37

DISBURSEMENTS.

Balance due treasurer August 31, 1901	\$119.53
Paid for salaries	14,008.30
repairs	1,091.31
books and supplies	1,218.83
lighting and water	107.70
advertising and printing	52.59
furniture and apparatus	594.35
fuel	72.68
rent of rooms for high school	275.00
miscellaneous expenses	294.12
Balance in treasurer's hands	968.96
	<hr/> \$18,803.37

GEORGE H. ADAMS,
Treasurer.

PLYMOUTH, August 20, 1902.

I have this day examined the above account and find the items properly vouched and the account correctly cast.

JAMES C. SIMPSON,
Auditor.

REPORT OF THE PRINCIPAL OF THE NORMAL SCHOOL.

Trustees of the New Hampshire Normal School :

GENTLEMEN,—I herewith submit my first biennial report as principal of the New Hampshire State Normal School :

The work of the past two years has been done under the most favorable circumstances.

At the last session of the legislature the annual appropriation for the Normal School was increased from ten to fifteen thousand dollars. While the additional funds at our command have not enabled us to make all necessary innovations, much has been done towards extending the facilities of the school.

In entering upon my administration I found the Normal School building crowded to overflowing. The model schools, covering eight years' work, were conducted in four rooms. The high school, with an enrollment of eighty pupils, occupied rooms in the Normal building. The accommodations were so inadequate as to make it necessary for Normal and high school classes to alternate in recitation rooms.

At the beginning of last year's work the joint board made arrangements by which temporary quarters were secured for the high school in the Kidder block. Through this change the model schools were given two additional rooms. The changed condition enabled us to separate two of the primary rooms, placing one grade, or year's work, in each of these rooms, in a single department, thus greatly increasing the facilities for training in the model schools.

During the coming year provisions have been made for the use of two additional rooms. By this plan the opportunity for training will be twice that afforded by previous arrangements.

The necessity for closer supervision was apparent, and a critic teacher was employed for the grammar and intermediate departments. One year ago a second critic teacher was placed in charge of the primary department. The model

schools were thus placed under the close supervision of two critic teachers. From this plan much is expected in the way of advancement and efficiency of work.

The desire upon the part of the management of the school is to make of the training department model schools in every respect. It is believed that the professional work of the institution can rise no higher than the weakest link in this department of the work.

The expenditures for text-books and stationery for the model schools have been reduced to the minimum in order that the material for supplementary reading may be increased. When the critic teacher began her work in this department practically nothing was to be found in the way of supplementary reading in addition to the regular readers. At the present time the supply of supplementary reading is quite adequate to our needs.

Chairs and tables have taken the place of old desks in the primary department. Kindergarten material has been introduced, and the conditions in general seem as favorable as could be expected for doing a high order of work.

In the Normal proper the plan has been to organize the work under the heads of departments; the aim being to place each department in the hands of a specialist.

Much has been done in the way of physical training. Under the direction of the supervisor in this department classes have been organized and material purchased sufficient to carry out successfully dumb-bell and Indian club practice. It is hoped that this branch of the work may be the means of doing much towards bettering the condition of students connected with the school.

Self government has been in successful operation during the past year. The school is organized as nearly as practicable upon the plan for state government, and is designated "The New Hampshire Normal School State." Without exception students accepting positions of trust under this organization have discharged their duties faithfully and conscientiously, so much so, in fact, that not a single case of discipline has found its way to the principal or faculty.

The exercises for the regular mid-year graduation have been omitted. Students completing the work at the end of the fall term have been given their credits, but the formal exercises of graduation have not taken place until the close of the year's work. Thus much time usually devoted to occasions of this kind has been saved for the regular work of the school.

For the year 1900-1901, 189 pupils were enrolled in the model schools; 79 were enrolled in the high school; 102 were enrolled in the Normal School; 12 students were graduated from the high school and 40 from the Normal. For the present year 197 pupils were enrolled in the model schools; 89 were enrolled in the high school; 140 were enrolled in the Normal School; 13 students were graduated from the high school and 40 from the Normal.

In the near future it is to be hoped that the library facilities for the Normal School may be greatly enlarged. Additional funds are needed in order that the department work may be extended and that suitable statuary, pictures, and equipment in general adequate to the needs of a progressive school may be supplied.

I desire to recommend that the requirement for admission into the Normal School shall be made high school graduation or its equivalent, and that a regular teacher's course, similar to the course furnished by the Massachusetts Normal Schools, should be instituted.

I believe it to be to the best interests of the state that provisions be made for a regular summer term of the Normal School, to the end that teachers permanently engaged in the state may have an opportunity for additional preparation, such as a well equipped Normal School alone can give.

Respectfully submitted,

J. E. KLOCK.

CALENDAR.

THIRTY-THIRD SCHOOL YEAR, 1902-1903.

First term begins Tuesday, September 9, 1902.

First term ends Friday, January 23, 1903.

Recess December 19 to January 6, 1903.

Second term begins Tuesday, January 27, 1903.

Second term ends Friday, June 19, 1903.

Recess April 10 to 28.

Fall term for 1903 begins September 8.

Entrance examinations are held the first day of each term,
and at other times by appointment with the Principal

NEW HAMPSHIRE STATE TEACHERS' ASSOCIATION.

FORTY-EIGHTH ANNUAL MEETING.

[Abstract of Secretary's report, Alice C. Taggart, Secretary *pro tem.*]

The forty-eighth annual meeting of the New Hampshire State Teachers' Association was held October 18 and 19, 1901, in High School hall, Manchester, President Fred L. V. Spaulding, of Manchester, presiding.

Devotional exercises were conducted by Rev. Thomas Chalmers, of Manchester. These were followed by an address of welcome by his Honor William C. Clarke, mayor of Manchester, and by the singing of several selections by pupils of the eighth and ninth grades under the direction of Mr. E. F. Richardson, supervisor of music, Manchester.

In the absence of the secretary, Miss Alice C. Taggart, of Manchester, was appointed secretary *pro tempore*.

The following were appointed to act as secretaries of the departmental exercises to be held in the afternoon:

High School section, Elsie Fairbanks, Manchester; Grammar School section, Alice C. Taggart, Manchester; Primary School section, Addie F. Straw, Concord.

Treasurer Channing Folsom presented a report, which was accepted.

In accordance with a vote of the association, the president appointed the following committees:

ON LEGISLATION.

CHARLES W. BICKFORD, Manchester.

JAMES H. FASSETT, Nashua.

JAMES E. KLOCK, Plymouth.

GEORGE H. WHITCHER, Durham.

HENRY C. MORRISON, Portsmouth.

ON NOMINATIONS.

CHANNING FOLSOM, Dover.

GEORGE H. WHITCHER, Durham.

H. G. DIBBLE, Berlin.

ON RESOLUTIONS.

JAMES E. KLOCK, Plymouth.

IDA B. HANSON, Dover.

CHARLES TRACY, Claremont.

The following program was presented :

10.30. Habit. Supt. Thomas M. Balliet, Springfield, Mass.

11.15. Nature and the Child.

Rev. William J. Long, Stamford, Conn.

FRIDAY AFTERNOON.

HIGH SCHOOL SECTION. Conducted by Principal John F. Kent, Concord High School. The meeting was held in Room 5, High School building.

2.00. Discussion on report of the Educational Council of New Hampshire upon Uniform Course of Study for High Schools.

Among other topics suggested for discussion were :

How may the Library aid the School?

One or two sessions daily for High Schools?

Do too many pupils attend the High School?

The value of High School papers published by students.

What should the High School demand of the Grammar School?

Does the High School give the right preparation for a business life?

Shall the College set the standard for the High School, or *vice versa*?

What shall the small High School do to meet modern educational demands?

Uniform Requirements for Graduation from all the High Schools of the State.

Should pupils entering the High School be classified according to their work in the Grammar School?

GRAMMAR TEACHERS' SECTION. Conducted by Supt. George H. Whitcher, Durham. The meeting was held in the hall of the Ash street school building.

- 2.00. History for Intermediate and Grammar Grades.

Miss Virginia Spencer, State Normal School, Plymouth.

- 2.30. Economy of Effort in the Grades.

Supt. H. C. Morrison, Portsmouth.

PRIMARY TEACHERS' SECTION. Conducted by Miss Lilly P. Shepard, Principal of Training School, Nashua. The meeting was held in High School hall.

- 2.00. Material for the Primary Grade.

Miss D. E. Mitchell, State Normal School, Plymouth.

- 2.30. Ideals in Literature.

Miss Katherine H. Shute, Department of English, Boston Normal School.

GENERAL MEETING.

High School Hall.

- 3.00. The Interpretation of Nature. Rev. William J. Long.

- 3.45. Artist or Artisan, which?

Col. Francis W. Parker, Director of the School of Education, University of Chicago.

FRIDAY EVENING.

High School Hall.

8.00. The Secret of a Strenuous Life.

Supervisor George H. Martin, Boston.

SATURDAY MORNING.

The committee on nominations reported, recommending :

For President—Henry C. Morrison, Portsmouth.*For Vice-President*—George H. Whitcher, Durham.*For Secretary*—Addie F. Straw, Concord.*For Treasurer*—Channing Folsom, Dover.*For Executive Committee*—Fred S. Libbey, Warner;
James E. Klock, Plymouth.*For Members of the Educational Council for three years*—Charles W. Bickford, Manchester; Charles L. Wallace, Lisbon.

The report was accepted and the officers were elected in accordance with the recommendations of the committee.

The executive committee was empowered to fill vacancies.

Principal James E. Klock, of the State Normal School, chairman of the committee on resolutions, reported the following, which were unanimously adopted :

WHEREAS, The meeting of the State Teachers' Association for 1902 has proved such an unqualified success, and the labors of those who have worked to make it such have been so untiring, be it

Resolved, That the association extends a hearty vote of thanks to the president for his general management and oversight of the whole; to the school committee and press of the city of Manchester for their hearty co-operation; to Professor Richardson and his pupils for the excellent music; to the railroads of the state and to the hotels of the city for the uniform hospitality extended to the members of the association.

[NOTE: Addie F. Straw declined to accept the secretaryship, and Harriet L. Huntress was appointed to the vacancy.]

Be it further

Resolved, That the thanks of the association and of the state are due our worthy state superintendent of public instruction and his associates of the committee on legislation for their efforts in securing much needed legislation. We look with pride to our new high school law, which opens our best high schools to children who were before denied these privileges, and to the law relative to the employment of children in factories and elsewhere.

Be it further

Resolved, That an expression of confidence be extended to the state superintendent of public instruction for the wisdom, integrity, and untiring zeal being now exercised in uplifting the schools of the state.

Samuel W. Robertson, secretary of the Educational Council of New Hampshire, made the annual report of that body to the association :

In submitting this the fourth annual report of the Educational Council of New Hampshire, it may not be out of place to state again that the council was organized in 1898 in accordance with the recommendations of a committee of the state association, at the annual meeting of 1897.

Its purpose is the unification of the various educational forces of the state. It is a constituent part of the state association, and all its members must be active members of the association. It is at present composed of nineteen members chosen as follows: Six from the state association; one each from Dartmouth College, the College of Agriculture and the Mechanic Arts, the Academy Association, and eight county organizations; the principal of the Normal School; and the state superintendent of public instruction. At its last meeting every member was present.

Much of the school legislation passed at the last meeting of the General Court of New Hampshire had its inception in the meetings of the council, and was in harmony with resolutions adopted by the council at its regular meetings.

Since the last meeting of this association, the council has held three meetings. Its special efforts during the year have been directed towards preparing a course of study for New

Hampshire schools, which may serve as a basis of work for all grades of public schools within the state, and also as a basis for a closer union between public and private schools. The work of preparing such a course has been in the hands of the following special committees of the council:

On elementary course, Supt. Bickford, Manchester; Prin. Klock, Plymouth; Miss Shepard, Nashua; Miss Merrick, Somersworth.

On high school course, Prin. Smart, Claremont; Prin. Webster, Holderness; Prof. Emery, Dartmouth College.

On nature study, Prof. Weed, Durham; Prin. Johnson, Hollis; Miss Shepard, Nashua.

It will be noticed that the membership of these committees well represents the various educational bodies of the state.

At a meeting of the council held one week ago, the reports of the committee were taken up for discussion and amendment, but owing to the difficulty of the task, it was impossible to complete their consideration and report them to to-day's meeting.

The report of the committee on the high school course was, however, accepted and adopted by the council, and is herewith submitted in printed form as the report of that body to the State Teachers' Association, with the recommendation that it be adopted.

The courses in nature study and drawing have also been accepted by the council, and are herewith submitted with the recommendation that they be adopted by the association.

The members of the council are harmonious and earnest in their efforts to promote the educational interests of the state, and with the hearty support of the teaching forces of the state I believe that much can be accomplished through its efforts to raise the educational standard of our state, and advance it from its twenty-sixth position among the states of the union to a position at the front.

Respectfully submitted,

S. W. ROBERTSON,

Secretary of the Council.

Voted, To adopt the courses reported, viz.: The course for high schools, and the courses in nature study and drawing, and to recommend them to the teachers and school officials throughout the state.

Voted, That the courses in nature study and drawing be printed by the association.

Superintendent Morrison of Portsmouth offered the following resolutions, which were adopted :

Resolved, That the principle is reaffirmed that the activities of the State Teachers' Association are not and should not be limited to the annual meeting; that the hearty interest of all friends of public education in the state is welcomed by the association in all its activities, and they are invited to become regularly enrolled members.

Resolved, That it is necessary to the just and orderly distribution of the financial obligations of the association, that participation in those obligations be more regularly imposed upon all the members of the association, especially upon those who participate directly in the benefits of the annual meeting.

Resolved, That the executive committee is instructed to conduct the business of the ensuing year upon the theories set forth in these resolutions.

The closing address was delivered by Col. Francis W Parker, upon "Education into Citizenship."

REGULATIONS

GOVERNING THE EXAMINATION AND CERTIFICATION OF SCHOOL TEACHERS.

SCHOLASTIC REQUIREMENTS.

(Books mentioned or syllabi given indicate the minimum requirement.)

Candidates for certificates shall pass satisfactory examinations in the following scholastic subjects:

Algebra, to Quadratics.

American History.

Arithmetic, oral and written, including simple accounts, the metric system, and mensuration.

Civics, the equivalent of Dole's American Citizen.

Current Topics.

Drawing, including Geometric Construction.

English Grammar and Composition.

Geography.

Music.

Penmanship.

Physiology and Hygiene, including the effects of Stimulants and Narcotics.

Reading, including American Literature.

Spelling.

Any *one* of the three sciences, at the option of the person examined, Botany, Zoölogy, Physics.

PROFESSIONAL SUBJECTS.

Candidates for certificates shall pass satisfactory examinations in the following professional subjects; for assistance in preparation they are referred to the works named:

METHODS, in connection with each scholastic subject.

HISTORY OF EDUCATION: Painter's History of Education, D. Appleton & Co.

SCHOOL MANAGEMENT: White's School Management, The American Book Co.; Tompkins's School Management, Ginn & Co.; Baldwin's The Art of School Management, D. Appleton & Co.

PEDAGOGY: McMurry's General Methods, Public School Publishing Co.; Hinsdale's Art of Study, The American Book Co.; Laurie's The Institutes of Education, The Macmillan Co.; Herbart's Science of Education, D. C. Heath & Co.; De Garmo's Herbart and Herbartians, Charles Scribner's Sons.

PSYCHOLOGY: Halleck's Education of the Central Nervous System, The Macmillan Co.; Ladd's Primer of Psychology, Charles Scribner's Sons; Halleck's Psychology and Psychic Culture, The American Book Co.; James's Briefer Course in Psychology, Henry Holt & Co.

SCHOOL LAWS OF NEW HAMPSHIRE, especially those relating to raising school funds, powers and duties of school boards, distinction between the town and the district, powers of the district, legal status of the teacher and the scholar, attendance of scholars and truancy.

CERTIFICATES.

To secure *permanent certificates* candidates must secure in the examination an average of not less than eighty (80) per cent. in all the required subjects, scholastic and professional, and must not fall below seventy (70) per cent. in any subject.

Candidates will be allowed two successive years for completing the examinations.

PROBATIONARY CERTIFICATES, valid for one year from the date thereof, will be granted to such candidates as attain an average standing of not less than seventy (70) per cent. in all the required subjects, scholastic and professional, and do not fall below sixty (60) per cent. in any subject, but candidates

for such certificates may omit the examination in Botany, Physics, Zoölogy, Algebra, Geometry, Music, History of Education, and Psychology.

MINIMUM AGE. No certificate will be issued to any person under eighteen years of age.

PRELIMINARY PAPERS.

Each candidate will, on a blank furnished for the purpose, make such statements regarding name, residence, education, experience in teaching, and other matters, as may be required.

Candidates, if they wish, may, previously to the day of examination, procure the proper blanks from the superintendent of public instruction and fill them out.

Each candidate will also have in readiness for the examiner a letter from some reputable person containing a statement as to the character of the candidate, and the addresses of two reputable persons who know the candidate, these persons to be readily accessible to the superintendent of public instruction.

HONORS.

An average mark of ninety (90) per cent. or higher, with no mark in any subject below eighty (80) per cent., will entitle the candidate to the words "with credit" in the certificate.

An average mark of ninety-five (95) per cent. or higher, with no mark in any subject below ninety (90) per cent., will entitle the candidate to the words "with honor" in the certificate.

NORMAL SCHOOL.

The superintendent of public instruction, upon the written recommendation of the principal of the State Normal School, and after the blank statements are properly filled and returned, will grant permanent certificates to graduates of the State Normal School.

MISCELLANEOUS ITEMS.

The superintendent of public instruction may, for reason satisfactory to himself and in the interests of the state, refuse to grant a certificate to any candidate deemed unworthy.

Candidates whose standing in the examination will not warrant the granting of a permanent certificate will be granted a probationary certificate, if the standing of such candidate is sufficiently high.

STATIONERY. Blanks and necessary paper will be furnished by the examiner.

UNIFORMITY. The examinations will be uniform and simultaneous throughout the state.

NOTICE. Candidates are requested, but not required, to give notice to the superintendent of public instruction of intention to take the examinations and the probable places of taking them.

CHOICE OF PLACE. Candidates are expected to take examinations at places nearest their residence.

INFORMATION. Information regarding the examinations will be cheerfully given by the superintendent of public instruction or any of the examiners.

GENERAL DIRECTIONS.

1. The printed questions will be sent to the examiners in sealed envelopes, and these will be first opened in the presence of the candidates at the time indicated on the program for the examination in each subject.

2. Marks will be on a scale of one hundred (100), and the number of credits to be allowed to each question will be indicated on the examination paper.

3. Candidates will be careful to write upon one side of the paper only, not to fold sheets, to number sheets for each subject consecutively, to write name of subject and name of candidate at top of each separate sheet. The questions are to be returned to the examiner with the answers. Answers are to be numbered to correspond with the questions. There must be a margin at the left of each paper.

4. Examiners will take into account the general appearance, neatness, legibility, and clearness of papers.
5. Penmanship will be judged from all papers presented.
6. Spelling will be judged by the papers on all subjects.
7. In the solution of problems processes should be indicated. The simple answer will not suffice.
8. All statements and answers must be written in ink.
9. Collusion between candidates or dishonesty will wholly invalidate the examination.
10. For information at the examination candidates must apply to the examiner only. No books, papers, or notes shall be used at the examinations, except such as are required by the examiner. Candidates must furnish their own rulers, compasses, pens, and pencils.
11. The examination in each subject is restricted to the half-day designated in the program.
12. Examiners are not allowed to modify materially or change any examinations.
13. Examiners will collect papers at the close of each half-day.
14. Questions must not be copied.
15. Results of examinations will be forwarded to candidates as soon as practicable.
16. Candidates must make themselves thoroughly familiar with the requirements and regulations of the examinations.

These regulations apply to examinations to be held in 1902 and 1903.

Candidates will be advised of any necessary changes or emendations. Modifications may be made for following years.

SAMPLES OF EXAMINATION PAPERS.

PEDAGOGY.

For illustration select from any topics usually found in courses of study for public schools.

Give plan in education through which the following may be normally trained :

1. The sensations and perceptions.
 2. Concept and judgment.
 3. Judgment and reason.
 4. Will.
 5. Emotions.
-

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. What has physiological psychology had to do in determining the breadth and extent of the course of study for the public schools, at home and abroad?
2. Do the activities of children indicate the direction in which they may be best educated? Fully explain.
3. *a.* How have introspective and experimental psychology aided us to understand the philosophy of "the nascent periods" in the development of children?
b. What is "the nascent period" for nature study? for language getting?
Give definite reasons for answer.

4. *a.* What has our knowledge of reflex action had to do in determining the choice of work and the methods to be employed in primary and intermediate schools?
b. How is reaction taken into account as indicated in *a*?
 5. In the course of study for primary grades, what provision, if any, should be made for the training of sensation, perception, memory, and reflex action?
 6. *a.* How may the spelling lesson be assigned to furnish the exercise proper in kind for the training of the various types of imagery in children?
b. How may the first lessons in reading be made to serve as suitable material for the training of the different types of imagery?
-

Select any three questions.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. Discuss the following: "The mind grows only by its own inherent energy."
2. Briefly suggest a method by which the subject matter of the course may be used as a means of quickening the perceptions of the pupil.
3. "The human intellect embraces a number of distinct faculties, each of which requires a different kind of exercise." Elaborate.
4. Suggest a method or device for number teaching calculated to give exercise to the creative powers of the mind.
5. Distinguish between the correlation of studies and the theory of concentration.
6. Outline a language lesson for the purpose of training the following: (*a*) Imagination; (*b*) emotion; (*c*) memory.
7. Show that qualitative instruction should precede quantitative instruction.
8. How may the course of study be used to develop definite lines of interest in literature and history?

PSYCHOLOGY.

Answer any three questions.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. Distinguish between (*a*) automatic action and reflex action; (*b*) a percept and a concept; (*c*) numena and phenomena.
 2. Briefly discuss (*a*) agraphia; (*b*) word blindness; (*c*) tactile sensation.
 3. Briefly give theory of the growth and development of the nerve cell.
 4. Give office of each of the following: (*a*) Pons Varolii; (*b*) medulla oblongata; (*c*) cerebellum; (*d*) the broca convolution.
 5. Mention the different laws of memory and adapt each to some different method of teaching.
 6. Show that the brain of a young child, from a psychological point of view, requires for its development an extended course of study.
 7. Explain how sensation, instinct, and emotion are involved in the development of the will.
 8. Give plan for the systematic training of (*a*) attention; (*b*) choice; (*c*) action.
-

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. *a.* Trace the growth and development of a nerve cell.
b. Illustrate the following: (1) Nucleus, (2) Neuroblast, (3) Neuron, (4) Deudron.
2. Enumerate a few of the activities observable in a child to justify the claim that early childhood is the time for the adjustment of his mental and physical capabilities.
3. Distinguish between introspective and experimental psychology.

4. Compare the following: (*a*) Simple reaction and discriminative reaction, (*b*) Unconscious reflex action and conscious reflex action.
5. What has psychology done to emphasize the importance of establishing a proper physical basis for the following: (*a*) Sensation, (*b*) Perception, (*c*) Reflex action, (*d*) Memory.
6. *a.* Mention the different types of imagery.
b. What educational importance do you attach to Galton's investigations with respect to imagery?

Relate the following, showing how the one is dependent upon the other:

1. Sensation and perception.
2. Conception and judgment.
3. Judgment and reason.
4. Reflex action and will.
5. Simple sensation and emotion.

HISTORY OF EDUCATION.

Select any three questions.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. Contrast the purposes and results of Athenian and Spartan education.
2. Who was the author of the inductive method of teaching? Difference between inductive and deductive methods?
3. What is the distinguishing characteristic of the *humanist's* ideals? Contrast them with the *realist's*.
4. What constitutes the teacher's duty as viewed by Pestalozzi?

5. Do you regard the kindergarten as entitled to a distinct place in our American system of public schools, and why?
6. In what way has the national government aided in the provision for educational advancement?

Omit any three questions.

TWENTY-FIVE CREDITS EACH.

1. What is the meaning of the term *caste* as applied to Egyptian civilization? What the effect of caste on the educational progress of the people?
2. What was Aristotle's plan of education?
3. Why did the Reformation lead to an educational awakening?
4. What was the general sentiment regarding the education of women in the seventeenth century?
5. In what way are we especially indebted to Pestalozzi as an educational reformer?
6. Why does the United States Constitution contain no clause concerning education?
7. What is the object and what the provisions of the high school law passed by the last New Hampshire legislature?

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. Who was Zoroaster? What the character of his teaching?
2. Greece is known as the "mother of arts"; Rome as the "law-giver." Account for each.
3. What were the peculiarities of Jewish education?
4. What needs in education did Locke especially emphasize?
5. Have the endowed schools of England been a help or hindrance to popular education there? Reason for answer.
6. Give reasons for or against the maintenance of kindergartens at public expense.

SCHOOL MANAGEMENT.

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. State the purposes of school discipline.
 2. Write somewhat fully upon the advantages and disadvantages of the school-city, or the pupil self-government experiment.
 3. What points or features would you especially note in determining the good or bad management of a school, in regard to (*a*) teacher, (*b*) pupils, (*c*) the room, building, or environment, giving also your ideal in regard to *a*, *b*, and *c*.
 4. Write briefly upon the coöperation of home and school as an aid to school management.
 5. Self-control being one of the purposes of school discipline, how may the teacher's management conduce to this?
 6. State your opinion of the "keeping after school" method of punishment, giving reasons for or against the same.
 7. In determining the punishment for an offence, by what principle would you be guided?
-

Select any three of the first six, and the seventh.

TWENTY-FIVE CREDITS EACH.

1. How can and should your school management contribute to good manners?
2. What place has play as a factor in education, and how do you utilize it in the conduct of your school?
3. How do you secure erect carriage and good position on the part of your pupils?
4. What are the reasons for and against the giving of prizes to stimulate children in their work?
5. Mention some proper incentives that do not stimulate the intellectual at the expense of the moral.

6. Mention the requisites on the teacher's part for good government.
 7. What is punishment? State the extent to which you make use of punishments in school.
-

Select any two of the first four, and the last two.

TWENTY-FIVE CREDITS EACH.

1. In the government of the school firmness and justice are the first requisites. Why?
 2. Write briefly upon sympathy and cheerfulness in relation to school government.
 3. How may the evils of communication and moving noisily be abated?
 4. What part should criticism play in the conduct of your school?
 5. Write briefly upon "Conduct of recitation."
 - a. Essentials.
 - b. Means.
 - c. Ends.
 6. State some causes of untruthfulness in children, and effects to be pointed out in correction.
-

SCHOOL LAW.

Answer any three questions.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. What is the literary fund? How distributed? May it be forfeited under any circumstances? If so, how?
2. Give the legal requirement for holding teachers' institutes; the rights of teachers to attend.
3. Name the officers of a school district, with their duties.
4. School meetings: Annual, when held? Special, how called? Who may vote?
5. Give all the provisions of law regarding certification of teachers.

Select any three questions.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. How may a superintendency of schools be established in a town or city? How in a "supervisory district"? What powers has a superintendent under New Hampshire laws?
2. Explain the difference between "town" and "district," as used in our school laws.
3. How are school boards composed? How chosen? For what term? What compensation do they receive? From what source?
4. Name three duties and three powers of school boards.
5. Name five powers of a school district.

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. Explain what connection the *town* or any *town officer* has with school affairs, financially or otherwise.
2. Define a school district. How many school districts in your home town? (Name the town.)
3. What is the "literary fund"? How distributed?
4. Name three powers of the school district.
5. What are the officers of a school district? Duties of each?
6. Explain the provisions of the employment laws applicable to children.

ALGEBRA.

Take any four questions.

TWENTY-FIVE CREDITS EACH.

1. Divide $a^2 + (m+n)a - 2m^2 + 11mn - 12n^2$ by $a - m + 4n$.
2. In 7 years, A will be 3 times as old as B, and 8 years ago he was 6 times as old. What are their ages?

3. Factor the following :

$$x^4y^2 - 27x^2y + 50.$$

$$27x^3 - 8y^3.$$

$$x^6 - 1.$$

4. Find the greatest common factor of $2x^3 - 3x^2 + 2x - 8$ and $3x^3 - 7x^2 + 4x - 4$.

5. Reduce $\frac{ax - bx - ay + by}{b^2 - a^2}$ to its lowest terms.

6. A and B can do a piece of work in 10 days, A and C in 12 days, and B and C in 20 days. In how many days can each of them alone do it?

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. Find the greatest common divisor of $2x^4 - 7x^3 + 5x^2$ and $x^3 + 3x^2 - 4x$.
2. A steamboat that can run 15 miles per hour with the current, and 10 miles per hour against it, requires 25 hours to go from Cincinnati to Louisville and return. What is the distance between these cities?
3. What is the sixth power of $1 - x$?
4. *a.* Factor $8x^3 - y^3$.
b. Factor $a^3 + b^3$.
c. Factor $a^6 - b^6$.
5. There are two numbers the sum of whose squares exceeds twice their product by 4, and the difference of their squares exceeds half their product by 4. Required the numbers.
6. There are two numbers in the proportion of $\frac{1}{2}$ to $\frac{2}{3}$ which, being increased respectively by 6 and 5, are in the proportion of $\frac{2}{3}$ to $\frac{1}{2}$. Required the numbers.

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. Find lowest common multiple of $1-x^4$; $1+2x^2+x^4$; $1-2x^2+x^4$.
2. Find highest common factor of x^3-8 and $x^3-6x^2+11x-6$.
3. Simplify $\frac{1}{x+x^2} + \frac{1}{x-x^2}$.
4. A gentleman distributing some money among beggars found that in order to give them a cents each he should need b cents more. He therefore gave them c cents each, and had d cents left. Required the number of beggars.
5. If a number of two figures be divided by the sum of its digits, the quotient is 7; and if the order of the digits be reversed, the quotient of the resulting number increased by 6, divided by the sum of the digits, is 5. Required the number.

Answer any four questions.

TWENTY-FIVE CREDITS EACH.

1. Factor the following:
 - (a) $16x^4-72x^2y^2+81y^4$.
 - (b) $x^4-(x+2)^2$.
 - (c) a^6-2a^3+1 .
2. A and B together can do a piece of work in m hours, B and C in n hours, and A and C in p hours. In how many hours can each alone do the work?
3. If the numerator of a fraction be trebled, and the denominator increased by 8, the value of the fraction is $\frac{9}{8}$, and if the denominator be halved, and the numerator decreased by 7, the value of the fraction is $\frac{1}{4}$. Find the fraction.

4. Find the square root of $9x^4 - 30a^3x^2 + 25a^6$.
5. The sum of the three digits of a number is 17. The sum of three times the first digit, five times the second, and four times the third is 70; and if 297 be added to the number the order of the digits will be reversed. Find the number.

ARITHMETIC.

Take any four questions.

TWENTY-FIVE CREDITS EACH.

1. A drover sold cows and sheep for \$6,105. If he received 65 per cent. more for the cows than for the sheep, how much did he get for the cows?
2. The proceeds of a note for 3 months when discounted at a bank at 6 per cent. were \$590.70. What was its face?
3. The sum of two numbers equals $5\frac{3}{4}$, and one of them is $7\frac{1}{3}$

$$\frac{49\frac{3}{10}}{11}$$
the difference between $\frac{49\frac{3}{10}}{11}$ and $\frac{22\frac{1}{5}}{9}$. What is the other number?
4. If 18 men can perform a piece of work in 12 days, how many men could perform another piece of work 4 times as great in $\frac{1}{3}$ of the time?
5. How far apart are the opposite corners of a square farm which contains 360 acres?
6. A hind wheel of a carriage, 4 feet 6 inches high, revolved 720 times in going a certain journey. How many revolutions did the fore wheel make, which was 4 feet high?

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. A can cut $2\frac{3}{4}$ cords of wood in $8\frac{1}{4}$ hours, and B can cut $2\frac{2}{3}$ cords in $6\frac{2}{3}$ hours. How much can both cut in 12 hours?
2. How much is a pile of wood 60 feet long, 4 feet wide, and 6 feet high worth at \$4.50 a cord?
3. A gets a salary of \$2,000 and B of \$2,300. What per cent. does B get more than A, and what per cent. does A get less than B?
4. A man owned 65 per cent. of a factory and sold 40 per cent. of his share for \$7,800. What was the factory worth at that rate?
5. Find the face of a note due in 60 days, such that if discounted at 6 per cent. the proceeds would be \$2,400.
6. If 10 horses in 14 weeks eat 5.65 tons of hay, how long will 11.3 tons last 7 horses?

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. What is the exact value of

$$(3 + 2\frac{1}{2} - \frac{3}{4} \text{ of } \frac{6}{2} + \frac{4}{2}) \div 4\frac{1}{5}?$$
2. A and B together can do a piece of work in twelve days. If A can do only three fourths as much as B, how long will it take each of them to do the work?
3. The difference between two numbers is 17, and $\frac{6}{7}$ of the first equals $\frac{7}{8}$ of the second. What are the numbers?
4. What will be the cost of the lumber to cover a gable roof 28 feet by 42 feet at \$18 per M, if the lumber is one inch thick? How many slates will be required to cover the roof if three slates cover a square foot?

5. A merchant marked cloth at 25 per cent. advance on the cost. The goods being damaged he was obliged to take off 20 per cent. of the marked price, and then sold it at one dollar per yard. What was the cost?
 6. Two rafters, each 24 feet long, meet at the ridge of a roof 12 feet above the body of the house. How wide is the house?
-

Select the first question and any three others.

TWENTY-FIVE CREDITS EACH.

1. Answer *c* and either *a* or *b*.
 - a*. Outline your method of teaching number to a first grade school.
 - b*. How and in what grade would you take up the subject of "percentage"?
 - c*. Which would you teach first, common fractions or decimals? Give reason.
2. A farmer owned a field that produced 42 tons of hay, and he bought another field one third as large and one and one half times as productive per acre. A year later he planted both fields with corn, and at harvest time found that he could raise 20 bushels of corn where he had raised 1 ton of hay. He sold the corn at 30 cents per bushel, and found that it brought 25 per cent. less than his hay had sold for the previous year. What was the price of the hay per ton?
3. Two men bought a flock of sheep; A paid \$192 and B paid \$144. Before they divided them dogs killed 14; the remainder they at once divided so that each man got what belonged to him, and they found that each got $12\frac{1}{2}$ per cent. less sheep than he would have had none been killed. What did they pay per sheep when they bought them?

4. A boy paid all the money he had for a cap and a pair of shoes, and found that 50 per cent. of the price of the shoes was 75 per cent. of the cost of the cap. What part of his money did he pay for each?
 5. I bought a horse, sleigh, and harness. The horse cost 70 per cent. of the whole, and the sleigh 20 per cent. of the whole. The sleigh cost \$30 more than the harness. What did I pay for the whole?
 6. An agent charged 25 per cent. for buying a lot of goods. The bill for the goods amounted to \$3,255. How much did the agent get for his services?
-

ORAL ARITHMETIC.

Twelve minutes. Read once.

1. 4·7 are how many times 1·21?
 2. A man bought 10 pieces of nankeen for \$6 $\frac{3}{8}$. How many cents did each piece cost?
 3. Homer and Robert together have 10 peaches; $\frac{1}{2}$ of Homer's share equals $\frac{1}{3}$ of Robert's. How many have each?
 4. Find the ratio of the surface of a two-inch cube to the surface of a square prism of the same base and whose height is four inches.
 5. Mr. Mason sold a pencil and a pen for \$22. If the price of the pencil was 20 per cent. higher than the price of the pen, what was the price of each?
-

1. A farmer had 95 sheep. He sold 39, and 17 died. How many had he left?
2. A floor 6 yards long, 4 yards wide, needs 32 yards of carpet. What is the width of the carpet?
3. I paid \$16.25 for cloth at \$1.25 per yard. How many yards did I buy?

4. A tank is filled by two pipes, one of which can fill it in 6 hours, and the other in 8. How long will it take both together to fill the tank?
 5. A has 96 dollars; B has 28 dollars more than A. How many dollars have both?
 6. Sold a horse for \$250, losing \$50. What is the loss per cent.?
 7. One-half the money received by a newsboy is profit. What per cent. does he make?
-

1. By selling an article for \$900 a man gained 25 per cent. How many dollars would he have gained if he had sold the article at an advance of 50 per cent.?
 2. If I buy an article for \$75 and sell it for \$50, what is my loss per cent.?
 3. A walks in 4 hours as far as B in 5. What is the ratio of A's speed to B's?
 4. A man has \$1,000 in the bank. What will remain after he has taken out \$478?
 5. What would be the cost of 120 books at $66\frac{2}{3}$ cents each?
 6. At 10 cents a quart what are 3 bu., 1 pk., 5 qts. of chestnuts worth?
 7. What will be the cost of 9 doz. hats at $\$1.33\frac{1}{3}$ each?
 8. How many square yards are there in the entire surface of a cube whose solid contents are 8 cubic yards?
-

DRAWING.

Select one question under each head.

THIRTY-THREE AND ONE-THIRD CREDITS EACH

MECHANICAL (use rule and compasses).

1. Inscribe a square within a given circle.
2. Construct a pentagon.
3. Working drawing of a square nut.

FREEHAND.

1. Appearance drawing of a box, cover open. Box placed below the level of the eye.
2. Appearance drawing of a doorway. Door opening from spectator.
3. Appearance drawing of a doorway. Door opening toward spectator.

DESIGN.

1. Simple design for cotton print in straight and curved lines.
2. Pleasing arrangement of pussy-willow within an oblong.
3. Design a book-cover for "Nature Study."

Select two questions under each of the following subjects.

TWENTY-FIVE CREDITS EACH.

MECHANICAL (use rule and compasses).

1. Construct a square.
2. Construct a pentagon.
3. Construct a regular polygon of any number of sides more than four.

FREEHAND.

1. Draw daisies well arranged in a panel.
2. From memory draw appearance of milk-can when handle is visible.
3. Draw appearance of a square prism resting on one of its oblong faces, when three faces are visible.

Select one question under each head.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

GEOMETRY (use rule and compasses).

- a.* Construct an equilateral triangle 4 inches wide. Inscribe within it the largest possible circle.
- b.* Draw a 5-inch horizontal line and letter it AB. An inch and a half above this line draw another line parallel to AB. Write the directions for this exercise.
- c.* Draw a horizontal line. Letter it AB. At A erect a perpendicular to AB. Trisect the angle thus formed. How many degrees in each of the angles made by trisection?

CONSTRUCTION.

(Use of rule and compasses optional.)

- a.* Draw to scale three views of metal bookrack. Place the dimensions properly upon the views and indicate the scale used.
- b.* Make from memory two views of a section of a spool in horizontal position. Place actual dimensions upon the views.
- c.* Draw top and front views of a tin cup of good proportion.

FREEHAND.

- a.* Make a memory sketch in outline of a flower pot, slightly below the level of the eye.
- b.* Make a group of two pottery forms. Sketch the group in outline.
- c.* Sketch an alder or pussy-willow twig.

Select one question under each head.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

GEOMETRY (use rule and compasses).

- a.* Make three points of unequal distances from one another and not in the same straight line. By geometry describe a circle through these three points.

- b.* Draw a line three inches long. Letter it AB. Draw a line meeting AB at A, and forming an obtuse angle with the line AB. Bisect this angle.
- c.* Draw a line AB two inches long. Upon this as a base construct by geometry a right-angled isosceles triangle.

WORKING DRAWINGS.

- a.* Draw two views and a section of a hollow cylinder 8 inches high, 4 inches wide, and one half of an inch thick. Place dimensions upon the drawings and indicate the scale used.
- b.* Draw the top and front views of a tin funnel, adding all the dimensions required for the construction of a funnel from the drawing.

FREEHAND DRAWINGS.

- a.* Sketch in outline a strawberry basket, working from the object.
- b.* Make a memory sketch of a pail.
- c.* Using the daisy as a motive, design a surface pattern suitable for a ceiling wall paper.

AMERICAN LITERATURE.

Omit question 4 or 5.

1. Name an American writer belonging to each of the following periods: (*a*) Colonial; (*b*) Revolutionary; (*c*) Civil War; (*d*) recent. (20)
2. State briefly concerning each one:
 - a.* The chief form which his work took or has taken, whether prose or poetry, and whether oratory, history, argumentation (including political, theological, and scientific discussion), the essay, the novel.
 - b.* The title of a representative work of each. (20)

3. Name an American writer in each of the departments of literature named in section 2. (20)
4. Write briefly concerning "The Autocrat of the Breakfast Table." (15)
5. "Now had the season returned, when the nights grow colder and longer,
And the retreating sun the sign of the Scorpion enters.
Birds of passage sailed through the leaden air, from the ice-bound,
Desolate northern bays to the shores of tropical islands.
Harvests were gathered in; and wild with the winds of September
Wrestled the trees of the forest as Jacob of old with the angel.
All the signs foretold a winter long and inclement.
Bees, with prophetic instinct of want, had hoarded their honey
Till the hives overflowed; and the Indian hunters asserted
Cold would the winter be, for thick was the fur of the foxes."

Of what poem is the above a passage?

Underscore the portions of the above which you would develop in order to insure as complete an understanding of the same as possible with a class of eighth-grade pupils. (15)

6. Arrange the material in the following list in suitable order for use as supplementary reading and for literature study, indicating to what year of school life you would assign each work. Indicate also the author of each work:

"Bunker Hill Speeches."

"Sketch Book."

"Man Without a Country."

"Vision of Sir Launfal."

"Last of the Mohicans."

"Tanglewood Tales."

“ Wonder Book.”

“ Snow Bound.”

“ Birds and Bees.”

“ Hiawatha.”

“ Courtship of Miles Standish.” (15)

7. Identify the author of one of the following passages and the work from which it is taken :

a. “ I beheld, too, in that vision
All the secrets of the future,
Of the distant days that shall be.
I beheld the westward marches
Of the unknown, crowded nations.
All the land was full of people,
Restless, struggling, toiling, striving,
Speaking many tongues, yet feeling
But one heart-beat in their bosoms.
In the woodlands rang their axes,
Smoked their towns in all the valleys,
Over all the lakes and rivers
Rushed their great canoes of thunder.” (10)

b. “ Build thee more stately mansions, O my soul,
As the swift seasons roll !
Leave thy low-vaulted past !
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life’s unresting sea.”
(10)

c. “ So live, that when thy summons comes to join
The innumerable caravan that moves
To that mysterious realm, where each shall take
His chamber in the silent halls of death,
Thou go not, like the quarry slave at night,
Scourged to his dungeon, but, sustained and soothed
By an unfaltering trust, approach thy grave
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams.” (10)

Select any five questions.

TWENTY CREDITS EACH.

1. Name a representative American author in each of the following departments of literature : Theology, science, the essay, history, the novel, poetry, oratory.
2. Name the principal work of each.
3. Show how the Civil War and the slavery question affected the development of American literature.
4. Write briefly concerning the relation of American to English literature, pointing out those authors who seem to you most distinctively American.
5. Give an abstract of either *Evangeline*, *The Vision of Sir Launfal*, or *Snow Bound*.
6. Write a short paragraph on the life and works of one from each of the following groups :
 - (1) William Dean Howells.
Thomas Bailey Aldrich.
Charles Dudley Warner.
 - (2) Edmund Clarence Stedman.
John Fiske.
James Freeman Clarke.
 - (3) Bret Harte.
Samuel L. Clemens.
Charles F. Browne.
 - (4) John Burroughs.
Eugene Field.
Celia Thaxter.
Joel Chandler Harris.
Lucy Larcom.

7. Identify the work and author from which two of the following quotations are taken :

- (1) "The leper raised not the gold from the dust :
Better to me the poor man's crust,
Better the blessing of the poor,
Though I turn me empty from his door ;
That is no true alms which the hand can hold ;
He gives nothing but worthless gold
Who gives from a sense of duty."
- (2) "I beheld, too, in that vision
All the secrets of the future,
Of the distant days that shall be.
I beheld the westward marches
Of the unknown, crowded nations.
All the land was full of people,
Restless, struggling, toiling, striving,
Speaking many tongues, yet feeling
But one heart-beat in their bosoms.
In the woodlands rang their axes,
Smoked their towns in all the valleys,
Over all the lakes and rivers
Rushed their great canoes of thunder."
- (3) We hold these truths to be self-evident : That all men are created equal ; that they are endowed by their Creator with inherent and inalienable rights ; that among these are life, liberty, and the pursuit of happiness ; that to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed ; that whenever any form of government becomes destructive of these ends, it is the right of the people to alter or to abolish it, and to institute new government, laying its foundation on such principles and organizing its powers in such form as to them shall seem most likely to effect their safety and happiness.

- (4) "Firmly builded with rafters of oak, the house of the farmer
 Stood on the side of a hill commanding the sea;
 and a shady
 Sycamore grew by the door, with a woodbine
 wreathing around it.
 Rudely carved was the porch, with seats beneath;
 and a footpath
 Led through an orchard wide, and disappeared in
 the meadow."

- (5) "*Eighteen hundred*,—it came and found
 The Deacon's masterpiece strong and sound.
Eighteen hundred increased by ten,—
 'Hahnsum kerridge' they called it then.
Eighteen hundred and twenty came,—
 Running as usual; much the same.
 Thirty and forty at last arrive,
 And then came fifty and *fifty-five*."

"Little of all we value here
 Wakes on the morn of its hundredth year
 Without both feeling and looking queer.
 In fact, there's nothing that keeps its youth,
 So far as I know, but a tree and truth.
 (This is a moral that runs at large;
 Take it. You're welcome. No extra charge.)"

8. Sketch a suitable course of school reading in American literature extending from, and including, the fifth grade through the ninth.

Omit either No. 2 or No. 3.

TWENTY CREDITS EACH.

1. Name a representative American in each of the following departments of literature: Theology, the essay, history, the novel, poetry, oratory.

2. Name one or more works (not history) and their authors which were called forth by the slavery agitation. By the Civil War. By the question of State Rights.
3. Tell the occasion for and author of the poem beginning
 “Aye, tear her tattered ensign down!”
4. Name the authors of the following works: The Maine Woods, Conquest of Mexico, The Rise of the Dutch Republic, Bitter-Sweet, Prue and I, France and England in North America, The Victorian Poets, Back-Log Studies, Tom Sawyer, Ramona.
5. Write a short paragraph on the life and works of one from each of the following groups:
 - a. Jonathan Edwards, Benjamin Franklin, Alexander Hamilton.
 - b. Washington Irving, William Cullen Bryant, Edgar Allen Poe, Ralph Waldo Emerson, John Greenleaf Whittier.
 - c. Thomas Bailey Aldrich, John Fiske, Lewis Wallace, Samuel L. Clemens, Helen Hunt Jackson.
6. Identify the authors of three of the following passages and the works from which they are taken:
 - a. “Once upon a midnight dreary, while I pondered weak and weary,
Over many a quaint and curious volume of forgotten lore—
While I nodded, nearly napping, suddenly there came a tapping,
As of some one gently rapping, rapping at my chamber door—
‘Tis some visitor,’ I muttered, ‘tapping at my chamber door—
Only this and nothing more.’”

- b. "Meanwhile we did our nightly chores,—
Brought in the wood from out of doors,
Littered the stalls, and from the mows
Raked down the herd's-grass for the cows;
Heard the horse whinnying for his corn;
And sharply clashing horn on horn,
Impatient down the stanchion rows
The cattle shake their walnut bows;
While, peering from his early perch
Upon the scaffold's pole of birch,
The cock his crested helmet bent
And down his querulous challenge sent."
- c. "'Look at these arms,' he said, 'the warlike weapons
that hang here
Burnished and bright and clean, as if for parade or
inspection!
This is the sword of Damascus I fought with in
Flanders; this breastplate,
Well I remember the day! once saved my life in a
skirmish;
Here in front you can see the very dint of the bullet
Fired point-blank at my heart by a Spanish Arca-
bucero.'"
- d. "O better that her shattered hulk
Should sink beneath the wave;
Her thunders shook the mighty deep,
And there should be her grave;
Nail to the mast her holy flag,
Set every threadbare sail,
And give her to the god of storms,
The lightning and the gale."
- e. "And lo! from the assembled crowd
There rose a shout, prolonged and loud,
That to the Ocean seemed to say
'Take her, O bridegroom, old and gray
Take her to thy protecting arms,
With all her youth and all her charms!'"

Select questions to aggregate 100 credits.

1. Name the authors of ten of the following works :

(40 credits.)

- (1) The Rise of the Dutch Republic.
- (2) Thanatopsis.
- (3) The American Scholar.
- (4) Poor Richard's Almanac.
- (5) The Sketch Book.
- (6) The Grandissimes.
- (7) Ben-Hur.
- (8) The Chambered Nautilus.
- (9) The Luck of Roaring Camp.
- (10) The Raven.
- (11) The Great Stone Face.
- (12) The Victorian Poets.

(30 credits.)

2. Write briefly upon the life and works of one from each of the groups which follow.

- (1) William Dean Howells.
Thomas Bailey Aldrich.
Charles Dudley Warner.
- (2) Edmund Clarence Stedman.
John Fiske.
James Freeman Clarke.
- (3) Bret Harte.
Samuel L. Clemens.
Charles F. Browne.
- (4) John Burroughs.
Eugene Field.
Celia Thaxter.
Joel Chandler Harris.
Lucy Larcom.

(30 credits.)

3. Give the *noms de plume* of the following American writers :

- (1) Mary Noailles Murfree.
- (2) Samuel L. Clemens.
- (3) Mary A. Dodge.
- (4) Cincinnatus Heine Miller.

(20 credits.)

4. Write briefly (not more than half a page) upon the author, story and historical setting of "A Man Without a Country."

(20 credits.)

5. Upon what era in American society is based the story of "The Scarlet Letter"?

(20 credits.)

6. Name some of the men who formed the Concord group of authors.

(20 credits.)

7. What historical incident forms the basis of the story of "Evangeline"?

(10 credits.)

8. Name five Americans of foremost literary rank whose work was either called forth or deeply influenced by the slavery question and the Civil War.

(10 credits.)

9. Name three important pieces of literature called forth by the slavery question and the Civil War.

GRAMMAR.

Omit either 2 or 5*b*.

1. Differentiate simple, compound, and complex sentences.
Name the forms of connectives which can be used in compound and those which can be used in complex sentences. (10)
2. Define *subject* and *predicate* as grammatical terms.
Indicate the complete subject and the complete predicate in the following sentence: "After some time, an ingenious tradesman, Mr. Matthew Adams, who had a pretty collection of books and who frequented our printing house, took notice of me, invited me to come to his library, and very kindly lent me such books as I chose to read." (10)
3. "Cassius,
Be not deceiv'd; if I have veil'd my look,
I turn the trouble of my countenance
Merely upon myself."
 - a. Classify this sentence as simple, compound, complex. (5)
 - b. Analyze without diagram. (15)
4. Define voice, and explain fully. (10)
5.
 - a. Write the plurals of the following nouns: bath, muse, fireman, politics, gas, turkey, beach, Mussulman, lunch, army, German, valley, bounty, news. (10)
 - b. Explain the difference in significance between: Brothers and brethren, dies and dice, genius and genii, indexes and indices. (10)
6. Discuss the uses of the infinitive. Identify the infinitives in the following sentences:
 - a. The great tree, swaying fearfully, soon yielded to the blast.
 - b. Rest is not quitting the busy career.
 - c. To retreat was difficult, to advance impossible.

- d.* Have you heard the message the brooklets are bringing?
- e.* The pupil wishes to study grammar.
- f.* Seeing was believing. (10)
- 7. Punctuate and capitalize correctly the following words:
the instructor next questioned frank blank mr blank
said he can you explain to me president madisons belief
as set forth in the federalist yes sir i think i can
replied frank. (20)
- 8. What would be your practice in teaching capitalization
and punctuation to a class of twelve-year-old children,
whose training has been entirely neglected in this respect? (10)

Select any five questions.

TWENTY CREDITS EACH.

- 1. Explain and illustrate by examples the terms "phrase" and "clause."
- 2. Write (*a*) a sentence containing but a single proposition; (*b*) a sentence containing two or more co-ordinate propositions; (*c*) a sentence containing at least one principal and at least one subordinate proposition.
- 3. What is the meaning of the term "modifier"? Into what classes are modifying expressions divided and what is the basis of this classification? Illustrate.
- 4. Explain and illustrate the terms "transitive" and "intransitive."
- 5. Analyze entire:
"Close to my heart I fold each lovely thing the sweet day yields."
- 6. Explain the correct use of *shall* and *will*; of *may* and *can*. Give illustrations.
- 7. Punctuate and capitalize correctly the following sentence, which is quoted from Parkman: gentlemen he said as his recital ended i would rather have written those lines than take quebec none were there to tell him that the hero is greater than the poet francis parkman.

Select any five questions.

TWENTY CREDITS EACH.

1. Explain and illustrate the terms "transitive" and "intransitive."
2. Explain and illustrate by examples the terms "active" and "passive."
3. "The hope of good things to come, and the memory of joys we have tasted in the past, unite to make attractive what would without their influence often be an almost unbearable present." Underline the subordinate or dependant clauses.
4. Write a sentence illustrating a noun clause used as subject.
5. "This is a very valuable horse." Re-write this sentence, using instead of "valuable" an adjective phrase. Re-write, substituting for "valuable" an equivalent adjective clause.
6. "We value lightly that which costs us nothing." Tell what part of speech each word in this sentence is.
7. Explain the correct use of "may" and "can," and give illustrations.
8. Punctuate and capitalize properly the following sentence. said the young lady the weeds you see have taken the liberty to grow and I thought it unfair in me to prejudice the soil towards roses and strawberries.

Select any five questions.

TWENTY CREDITS EACH.

"He that hath pity upon the poor lendeth unto the Lord, and that which he hath given will he pay him again."

1. Make a complete clausal analysis of the above sentence
2. Name all the phrases in the sentence.

3. What is an abstract noun? Give five examples of abstract nouns.
"To whose entreaty he yielded is no longer a question."
 4. Make a complete verbal analysis of the sentence just given.
 5. Classify the words of the same sentence according to the parts of speech to which they belong.
 6. What is the difference between attributive and copulative verbs? Illustrate.
 7. Write a sentence containing two members connected by a coördinate conjunction. Write one containing two members connected by a subordinate conjunction.
 8. "If the weather be fine, the company will be large."
Parse the simple predicate of the dependent clause.
 9. Point out the infinitives or verbal nouns in the sentences which follow.
 - a. I forgot to mail the letter.
 - b. Let every one be true to himself.
 - c. Reading maketh a full man.
 - d. The lesson to learn is the well-doing of present duty.
 10. Inflect the verb "to be" throughout the indicative mood.
-

CIVICS.

Select any two of the four questions.

FIFTY CREDITS EACH.

1. Mention two officers who receive pay out of the state money.
When does the state legislature meet in regular session?
Mention two purposes for which (*a*) the town levies taxes, (*b*) county taxes.
United States census: (*a*) What is it? (*b*) How often taken? (*c*) In what year was the last one taken?

2. Give in substance the law in regard to teaching physiology and hygiene in the public schools.
What does the United States guarantee to every state?
How are representatives apportioned among the states?
Congress: (*a*) How often obliged to convene? (*b*) When?
What is the highest tribunal in the land? Of what is it composed and how chosen?
3. What business may be transacted at a special school meeting, and how is such a meeting called?
What is a congressman-at-large? What conditions necessitate the election of such an officer?
How many amendments have been added to the United States Constitution since the Civil War? What was their purpose?
Name three town officers, the duties of each, the term of office of each.
4. State the duties of attorney-general and his term of office.
What cabinet officer has charge of the coinage of money? the distribution of seeds?
Give a clear abstract of the truant laws of this state and their enforcement.
What is the law in regard to making out a register properly?
When is Arbor Day?

Select any two questions.

FIFTY CREDITS EACH.

1. Name three purposes for which the constitution of the United States was framed, given in the preamble.
How is the number of presidential electors to which any state is entitled determined? How many has New Hampshire?

2. Give the object of having two branches of the state legislature. How often are town meetings held? Name two officers elected at these meetings and their duties. How is the office of secretary of state (national) filled? How are new states admitted to the union? How are territories governed and how represented in congress?
 3. Who is commander-in-chief of the army and navy of the state? Of the United States? Mention three classes of persons who have no right to vote. How is the office of attorney-general (national) filled, and what is the salary attached?
 4. How is treason defined in the United States constitution? Mention a class of cases over which the United States supreme court has (*a*) original jurisdiction, (*b*) appellate jurisdiction. Name two principal sources from which the government derives its revenue. Mention three duties of the state superintendent of public instruction.
-

Select any two questions.

FIFTY CREDITS EACH.

1.
 - a.* Explain in detail the nomination and election of a state officer; a ward officer.
 - b.* State fully how a member of the United States house of representatives may be expelled.
 - c.* How is the office of justice of the United States supreme court filled, and for how long?
2.
 - a.* What constitutes a political party platform, and how is it formulated?
 - b.* Give reasons for and against an educational qualification for voter.
 - c.* Specify two points of difference between a state government and a territorial form of government.
3.
 - a.* What is meant by *reciprocity* between two nations?
 - b.* Give in order the successive steps in nominating a candidate for president of the United States.
 - c.* State two points of difference between the duties of a grand jury and a petit jury.

Take any four questions.

TWENTY-FIVE CREDITS EACH.

1. *a.* Mention five political districts of the state and the title of an official in each.
b. What was the purpose of establishing the national constitution as set forth in the preamble? What was the result?
2. *a.* Define "eminent domain," "warrant."
b. Who has the power to remove (1) the governor, (2) the president?
3. *a.* How many years must a foreigner have resided in the United States before being entitled to file his declaration of intention to become a citizen? After this how long before he can become fully naturalized?
b. Name some elective officers of the general court of New Hampshire.
4. *a.* Compare the government of the city with that of the town.
b. How are town, county, and state taxes assessed?
5. *a.* Prepare a brief outline upon the three forms of government, to be used in a teachers' meeting.
b. Contrast the duties of a consul with those of an ambassador.
6. *a.* State two rights guaranteed by the United States constitution to a person accused of crime.
b. What period in American history should be carefully studied preparatory to the study of the United States constitution?
7. *a.* Are the people of this state allowed to form a monarchical form of government? Why?
b. Name the chief officer of the United States house of representatives, and give two duties which he is required to perform.

HISTORY.

Take four questions, including the sixth.

TWENTY-FIVE CREDITS EACH.

1. Trace Washington through the Revolution.
 2. History and boundaries of the Louisiana territory.
 3. Give an account of the presidential election in 1860.
 4. Give a brief account of the Civil War, including causes.
 5. Write upon the settlement of New Hampshire.
 6. Would you prefer to have a single text-book in history, or would you have books by several authors? Give reasons.
-

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. Write briefly of two of the following: Samuel Adams, Horace Greeley, Daniel Webster, and Roger Williams.
 2. The Mexican War: Cause; result.
 3. Name the thirteen original states and give western boundary.
 4. Write of Marcus Whitman.
 5. Write briefly of our recent war with Spain. In what respect have our possessions increased?
-

Select any four questions including the fifth.

TWENTY-FIVE CREDITS EACH.

1. Name the thirteen English colonies in North America.
2. Write upon one of the following subjects: Braddock's defeat; the fall of Quebec; the Battle of Bunker Hill; the siege of Vicksburg.

3. To what states did the following presidents belong? For how many terms and by what political party was each elected: George Washington, Andrew Jackson, Franklin Pierce, Ulysses S. Grant, Chester A. Arthur, William McKinley, and Theodore Roosevelt?
4. Write briefly upon one of the following: The Stamp Act; Alabama claims; "Fifty-four forty or fight."
5. Write briefly upon the life of Theodore Roosevelt as (*a*) a city office-holder, (*b*) a state office-holder, (*c*) a soldier, (*d*) an author, and (*e*) a national office-holder.

Select three questions, including the first.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. Make a table showing all the presidents of the United States, in order, the state to which each belonged, and his political party.
2. Explain in full the method of electing the president.
3. Write on one of these topics:
 - a.* Spanish conquest of the half-civilized Indians.
 - b.* Settlement of Canada by the French.
 - c.* The Puritans in New England.
4. Give a brief account of the causes and conduct of the Civil War.
5. In what respect were the Articles of Confederation weak?

CURRENT TOPICS.

Select any three questions.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. Cecil Rhodes's contribution for education.
2. Peace in South Africa.
3. Volcanic eruptions in the Lesser Antilles.
4. The great coal strike.
5. The development of electric transportation in New Hampshire.

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. The industrial conditions of the country.
 2. China and the indemnity.
 3. Probable benefit of the Pan-American Exposition.
 4. New oil fields of the United States.
 5. Some incidents of President McKinley's tour to the West.
-

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. Visit of Prince Henry of Germany to the United States.
 2. The Isthmian Canal question.
 3. The tariff question as concerns Cuba and the Philippines.
 4. Free rural mail delivery in New Hampshire.
 5. The effect of the court's late decision upon the liquor traffic of the state.
-

Answer any four questions.

TWENTY-FIVE CREDITS EACH.

1. Note some recent governmental changes in Great Britain.
2. State the forms of government employed in Porto Rico, Cuba, and the Philippines.
3. The present progress of the South African war.
4. The Hay-Pauncefote treaty.
5. The Pan-American Exposition.

PHYSIOLOGY.

Select any two of the four questions.

FIFTY CREDITS EACH.

1. Mention three ways in which the eye is protected.
 In what respect are all alcoholic liquors alike?
 In what respect do they differ?
 Locate (*a*) the portal vein, (*b*) the jugular vein, (*c*) the pulmonary artery, (*d*) the aorta.
 Explain how the temperature of the body is maintained.
 How does nature attempt to stop a hemorrhage?
2. How can it be told whether the bleeding is from a vein or an artery?
 What provision is made to secure in the bones (*a*) strength, (*b*) elasticity, (*c*) lightness?
 State two purposes of the circulation of the blood.
 What causes the air to enter the lungs? How is it expelled?
 How does alcohol impair digestion?
3. Name the processes by which the food is converted into tissues by the body.
 Name two kinds of glands found in the skin, and state the purpose of each.
 What is (*a*) the glottis, (*b*) the epiglottis, (*c*) the œsophagus?
 Salivary glands: (*a*) locate, (*b*) purpose of, (*c*) how much fluid do they secrete daily?
 How is the action of the heart affected by alcohol?
4. Name two causes of impure water. Name two ways in which it may be made purer.
 How can you show that the breath contains water and carbonic acid gas?
 The brain: (*a*) locate, (*b*) principal divisions, (*c*) convolutions, (*d*) weight.
 Effect of exercise upon the circulation of the blood.
 What sense is affected when we inhale ammonia?

Select any two questions.

FIFTY CREDITS EACH.

1. Name two objections to hasty eating. Name two objections to eating between meals. How does the skeleton protect the body, provide for its motion, and give it proper form? Describe and illustrate a hinge joint. Explain the flexibility of the wrist joint. What is a stimulant? A narcotic? Give an example of each and its effect upon some organ of the body.
2. Give the purpose of (*a*) curvature of the spinal cord, (*b*) flexibility, (*c*) cause of elasticity. A man bathes as follows: (*a*) after eating, (*b*) when he is chilly, (*c*) when he is tired. What results in each case? Bile is secreted from what, by what, and for what purpose? Describe the lungs: (*a*) as to position, (*b*) structure, (*c*) office.
3. How do the bones of the young differ from the bones of the old? Why is this a wise provision? Why should children not be taught to walk very young? Explain the structure of a knee joint. The heart: (*a*) size, (*b*) location, (*c*) shape, (*d*) structure.
4. Effect of alcohol upon albumen. Which need more food, people engaged in sedentary occupations, or those engaged in hard physical labor? Why? Draw a careful diagram of the ear, showing each part and naming it.

Select any two questions.

FIFTY CREDITS EACH.

1. *a.* Describe the processes of expiration and inspiration.
b. Why should we keep the skin clean?
c. Distinguish between chyme and chyle.
2. *a.* Why are students in training for athletics forbidden to use alcoholic liquors?

- b.* State one way in which the temperature of the body is regulated.
 - c.* What is meant by sensible perspiration? Insensible perspiration?
 - 3.
 - a.* How is the eye kept moist; moved; free from dust?
 - b.* Describe the linings and walls of the stomach.
 - c.* What is the diaphragm and its functions?
 - 4.
 - a.* Give the effect of alcohol upon the muscles.
 - b.* Account for the exhaustion that usually follows the excessive use of alcohol.
 - c.* State the effects of alcohol upon the growth of the bones. Chief danger in the moderate use of alcoholic drinks.
-

Take any two of 1, 2, 3, and any two of 5, 6, 7.

TWENTY-FIVE CREDITS EACH.

- 1.
 - a.* State three losses that the body is constantly sustaining.
 - b.* In the digestive process state (1) the work of the saliva, (2) the gastric juice.
- 2.
 - a.* What is the purpose of (1) the pulmonary circulation, (2) the greater circulation?
 - b.* Give two objections to breathing through the mouth.
- 3.
 - a.* Mention the subdivisions of the brain and describe each as to (1) size, (2) form, (3) matter, (4) function.
 - b.* Describe the effects of the habitual use of opium.
- 4. Outline in a brief but comprehensive manner a talk to a teaching corps upon the use and abuse of alcoholic liquors.
- 5. Outline, briefly, a talk upon hygiene.
- 6. Mention three distinct aids in teaching physiology and a fact that can be more clearly demonstrated by the use of each.
- 7. Outline a review lesson in physiology on "the adaptation of structure to function."

GEOGRAPHY.

Omit any three of the first six.

TWENTY CREDITS EACH.

1. What is meant by (*a*) parallelism of the earth's axis; (*b*) summer solstice; (*c*) the longitude of a place.
2. Name ten states through which you would pass in going directly west from New York city, and name the capital of each.
3. Locate the following cities: Omaha, Galveston, Cleveland, Louisville, Little Rock, Christiania, Berne, Herat, Bombay.
4. Associate with the rapidly growing commerce of the Pacific coast of the United States (*a*) three western seaports of the United States; (*b*) three foreign seaports; (*c*) three important exports; (*d*) three important imports.
5. Which island lies farther north, Newfoundland or Iceland? Which has the milder climate? Explain.
6. State where the following rivers rise, into what they flow, name a large city on each, and tell to what nation the city belongs: (*a*) The Ohio; (*b*) the St. Lawrence; (*c*) the Danube; (*d*) the Rhone.
7. Is the use of outline maps in the grades desirable? If so, how would you use them to the best advantage? If not, why not?
8. Is it desirable to take classes out of the schoolroom for natural object lessons in geography? Reason for your answer.

Select any five questions, including the second.

TWENTY CREDITS EACH.

1. *a.* When it is 10 o'clock at Boston, 71° W., what time is it at Chicago, $87^{\circ} 38'$ W.?
b. Why do degrees of parallels decrease in length from the equator to the poles?

2. Draw a map of New Hampshire and locate on it the White Mountains, Lake Winnepesaukee, the Merrimack river, Concord, and the place where this examination is held.
3. Name the states at the four corners of the United States, give largest city in each, and tell for what each state is noted.
4. If a resident of St. Petersburg wishes to attend the Pan-American Exposition, can he reach it by an entirely water route? If so, over what bodies of water could he come?
5. How would you teach a child the cardinal points (*a*) on the earth, (*b*) on a map?
6. In what grade or year of school would you begin the use of a text-book in geography? Give reasons for your answer.

Select five questions, including the seventh.

TWENTY CREDITS EACH.

1. What is meant by the inclination of the earth's axis? What is its effect? What would be the effect if there were no such inclination?
2. What is the center of (*a*) the water hemisphere, (*b*) the land hemisphere?
3. Locate (*a*) Manchuria, (*b*) Luzon, (*c*) Ceylon, (*d*) Martinique, (*e*) Tutuila, (*f*) Sardinia. To what country does each belong?
4. What are glaciers, and how formed? Locate three glacier fields.
5. Where in New Hampshire will you find (*a*) the best farms, (*b*) the best granite quarries, (*c*) the greatest shoe factories, (*d*) the most important cotton mills, (*e*) the greatest paper mills, (*f*) the greatest lumber industry?

6. In teaching the physical features of a given region, would you begin with the water courses and work up to the mountains, or *vice versa*? Reason for your answer.
 7. What part of geography do you find hardest to teach, and what method do you adopt to make it clear to pupils?
-

PHYSICS.

Answer 1, and three other questions.

TWENTY-FIVE CREDITS EACH.

1. Write an outline of a lesson on the system of water supply of a large town.
 2. A piece of granite weighs 2,698 grams in air and 1,950 grams in water. Allowing 2 grams for the buoyancy of the air, find its specific gravity.
 3. A steamer is due at a port eight miles due west in an hour. The intervening water is flowing in a tidal current which sets south at a rate of six miles an hour. At what rate, and in what approximate direction, must the steamer head to make port on time?
 4. Describe briefly, with diagram, the essential parts of the steam engine.
 5. State and explain from the molecular point of view, the thermic effect of compressing a gas.
 6. Give a general account of the metric system of measurements.
-

Answer the first question and two others.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. Given a schoolroom heated by steam radiators, with no special ventilating flues; suggest some simple plan for ventilating the room effectively, without exposing the pupils to bad draughts; and explain the physical principle on which your plan depends. Give diagrams.

2. Define: Conservation of energy; conservation of mass; molecule; gravity; equilibrium.
3. Explain, with diagram, the action of a common water pump.
4. Account for the low temperature on the tops of mountains.
5. If a body weigh 100 pounds on the earth, how much would it weigh on the sun; the sun's mass being 330,000 times the earth's mass, and its radius 110 times that of the earth.

Select any four questions.

TWENTY-FIVE CREDITS EACH.

1. What is heat, considered with reference to the molecular theory?
2. Describe an experiment showing the porosity of water.
3. Explain why the wind blows from sea to land during the daytime in summer.
4. Describe the three kinds of levers, and give an example of each kind.
5. What physical principles are illustrated in riding a bicycle?
6. How far will a body fall (neglecting the resistance of the air) in twelve seconds?

BOTANY.

Answer 1, 2, and two other questions.

TWENTY-FIVE CREDITS EACH.

1. Sketch and describe the specimen provided you. (The examiner will provide each candidate with some easily obtained botanical specimen, as a flower, twig, apple, nut, etc.)

2. Write an outline of a class lesson, with experiments, to show how plants purify the air.
 3. Describe the minute structure of a leaf, and state the uses of the different parts.
 4. How are plants which live in a dry climate adapted to their habitat?
 5. Write upon the most important vegetable fiber.
 6. State the distinctive characteristics of the oak, beech, and elm trees.
-

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. For this question the examiner will furnish the candidate with some botanical specimen, such as may be available, *e. g.*, a twig with buds on it, a peanut, an apple, etc. The candidate will make a careful study and write a report upon the specimen furnished him.
 2. Write an outline of a class lesson on the pine tree.
 3. Answer three of the following:
 - a.* Describe the life history of a plant of Indian corn.
 - b.* What is chlorophyll? How and where is it formed? What is its use?
 - c.* Write a brief account of the principal trees found in the vicinity of your home.
 - d.* Write briefly on the movements of plants.
-

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

1. Make a drawing and write a description of the specimen given you.
2. Write a description of a class exercise on the transportation of seeds.

3. (Answer three.)
 - a.* What uses do fruits serve to the plants that bear them?
 - b.* What determines the arrangement of the leaves on a tree?
 - c.* Explain in detail how a flower is fertilized.
 - d.* Explain what is meant by the term "survival of the fittest," and what this has to do with the assemblage of plants found in any given locality, as a sandy plain, a rocky hillside, a swamp, etc.

ZOOLOGY.

THIRTY-THREE AND ONE-THIRD CREDITS EACH.

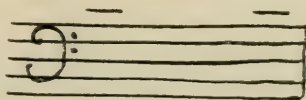
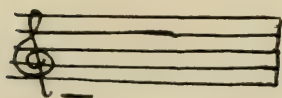
1. Make a drawing and write a description of the specimen given you.
2. Give an outline of a class lesson on the common house fly.
3. (Answer three.)
 - a.* Write an outline classification of the animal kingdom.
 - b.* Describe the food of the star fish, and tell how the creature obtains it.
 - c.* Describe the adjustment of the snake to its environment.
 - d.* State the principal modes of protection found in the animal kingdom, and compare their relative advantages.

MUSIC.

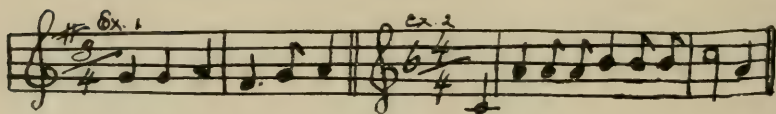
Answer any four questions.

TWENTY-FIVE CREDITS EACH.

1. Name the degrees of the staff with the G and the F cleffs.



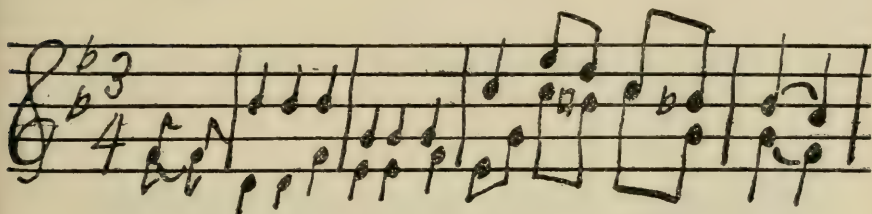
2. State the key in each of the following exercises, and give the Italian syllables of each :



Answer six questions.

SIXTEEN AND TWO-THIRDS CREDITS EACH.

1. Does it pay to teach vocal music in the public schools?
Give your reasons.
2. The following measures are from a well-known American song:



- (a) Give its name; (b) the key; (c) the Italian syllables of both parts.
3. Explain these characters as used in music: p; f; b; $\frac{3}{4}$.
4. Write a short exercise in the key of F, in $\frac{3}{4}$ meter.
5. At about what age in boys does the voice begin to change, what causes this change, and how would you treat it in vocal music?
6. Should a musical instrument be used in teaching vocal music to a class, and, if so, when?
7. Should those pupils who have no "ear" for music be excused from the recitation in music? Why?

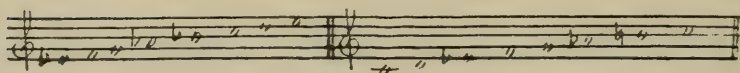
Answer any four questions.

TWENTY-FIVE CREDITS EACH.

1. (Take *a* or *b*).
- a*. Name the *signature* and the *key* in each of the following examples, and state whether the key is major or minor.



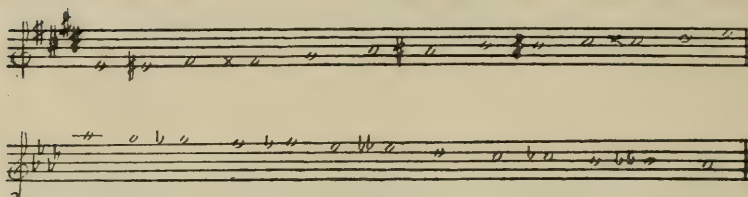
5. Name the key of the following scales, stating whether major or minor.



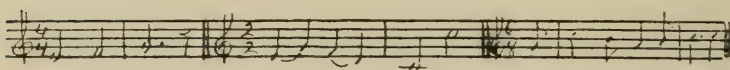
Key

Key

2. Name each note in the following examples by writing under the note its syllable name, or its singing (numerical) name.



3. State how many beats in a measure in each of the following examples, and what kind of a note represents one beat.



4. What is the significance of the upper figure in the time-signature? Of the lower figure?
 5. Which beat in the measure always has the strongest accent? Which the weakest?
 6. State which beat in the measure introduces each of the following examples, and whether the accent is strong or weak.



APPOINTMENTS OF SUPERINTENDENT.

1901.

Friday, January 4. Concord, meeting of Normal School trustees.

Saturday, January 5. Boston, meeting of directors of American Institute of Instruction.

Tuesday, January 8. Somerville, New Hampshire Club, "Educational Conditions in New Hampshire."

Friday, January 11. Hillsborough Bridge, Contoocook Valley Association.

Tuesday, January 15. Greenland, Pomona Grange, "School Supervision."

Friday, January 18. Plymouth, meeting of board of trustees of Normal School and joint board.

Monday, January 21. Alton, investigation of educational conditions by invitation of superintendent.

Friday, January 25. Wolfeborough, Teachers' Institute and evening address, "School Supervision."

Thursday, January 31. Concord, hearing on the High School bill.

Friday, February 1. Frankestown, "Educational Conditions."

Monday, February 4. Hampstead, investigation of educational conditions by invitation of school board.

Friday, February 8. Pittsfield, Teachers' Institute and evening address, "Supervision of Schools."

Saturday, February 23. Boston, directors of American Institute of Instruction.

Monday, February 25. Epping, evening address, "District Supervision."

Saturday, March 2. Plymouth, Normal School, "History of Education in New Hampshire."

Monday, March 4. Nashua, mothers' meeting, "Co-operation between Home and School."

Wednesday, March 6. Barnstead, "District Supervision."

Thursday, March 7. Plaistow, evening address, "Rural Schools."

Friday, March 8. Plaistow, Teachers' Institute.

Friday, March 8. Newton, evening address, "Rural Schools."

Friday, March 29. Concord, state teachers' examinations.

Saturday, March 30. Concord, state teachers' examinations.

Thursday, April 4. Plymouth, Normal School, "School Law."

Monday, April 8. Newington, evening address, "School Legislation."

Saturday, April 20. Newmarket, school meeting.

Monday, April 22. Penacook, school meeting.

Tuesday, April 23. Plymouth, State Normal School, "School Law."

Friday, April 26. Concord, High School Teachers' Institute.

Saturday, April 27. Concord, High School Teachers' Institute.

Tuesday, April 30. Sunapee, Teachers' Institute and evening address, "Education in New Hampshire."

Friday, May 3. Manchester, Merrimack Valley Teachers' Association and Teachers' Institute.

Friday, May 10. Berlin, Coös County Teachers' Association and Teachers' Institute.

Wednesday, May 15. Belmont, Teachers' Institute and evening address, "Educational Conditions."

Thursday, May 16. Plymouth, State Normal School, "School Law."

Friday, May 17. Dover, Strafford County Teachers' Association and Institute.

Wednesday, May 22. East Jaffrey, Teachers' Institute, evening address, "Recent School Legislation."

Friday, May 24. Franklin, Winnepesaukee Teachers' Association and Teachers' Institute.

Friday, June 7. Plymouth Normal School, "School Law."

Tuesday, June 11. Concord, medical examinations.

Wednesday, June 12. Concord, medical examinations.

Wednesday, June 19. Concord, Capital Grange, address, "Are our Public Schools as Useful as They Might Be?"

Friday, June 21. Plymouth, meeting of trustees of Normal School and joint board.

Friday, June 21. Plymouth, State Normal School graduation.

Friday, June 28. Concord, state teachers' examinations.

Saturday, June 29. Concord, state teachers' examinations.

Monday, July 8. Newmarket, medical hearing on revocation of license of Dr. Beaudet.

Tuesday, July 16. Claremont, address, "Teachers' Examinations."

August 12-24. Plymouth, Summer Institute; ten lectures on "School Law."

Monday, August 26. Plymouth, state teachers' examinations.

Tuesday, August 27. Plymouth, state teachers' examinations.

Saturday, September 14. Concord, Committee of Educational Council on uniform course of study.

Friday, September 20. Committee of Educational Council on uniform course of study.

Saturday, September 21. Concord, annual meeting of Educational Council of New Hampshire.

Tuesday, September 24. Hanover, Webster Centennial.

Wednesday, September 25. Hanover, Webster Centennial.

Saturday, October 5. Boston, Committee on Uniform Course of Study.

Tuesday, October 8. Concord, Normal School trustees' meeting.

Friday, October 11. Concord, meeting of Educational Council.

Friday, October 11. Pembroke, inspection of Pembroke Academy.

Saturday, October 12. Concord, meeting of Educational Council.

Thursday, October 17. Manchester, schoolmasters' banquet.

Friday, October 18. Manchester, State Teachers' Association.

Saturday, October 19. Manchester, State Teachers' Association.

Thursday, October 24. Durham, Eastern New Hampshire Pomona Grange, "Hesperia Movement."

Friday, October 25. Keene, Cheshire County Teachers' Association and Institute, "State Certification of Teachers."

Wednesday, October 30. Pittsburg, Teachers' Institute, "Hints to Teachers"; evening address, "Rural Education."

Thursday, October 31. Stewartstown Hollow, Farmers' Institute, "School Supervision."

Friday, November 1. Whitefield, Coös County Teachers' Association and Teachers' Institute, "Hints to Teachers"; evening, "Educational Conditions."

Thursday, November 7. Bethlehem, evening address, "Equalization of School Privileges."

Friday, November 8. Lisbon, Ammonoosuc Valley Teachers' Association and Institute, "Hints to Teachers"; evening address, "New Hampshire Educational Conditions."

Friday, November 15. Boston, meeting of New England school superintendents.

Wednesday, November 20. Plymouth, visit to State Normal School.

Wednesday, November 27. Epping, inspection of high school conditions.

Thursday, December 5. Concord, meeting of Joint Medical Boards.

Friday, December 6. Somersworth, Strafford County Teachers' Association and Institute.

Saturday, December 7. Somersworth, Strafford County Teachers' Association and Institute.

Tuesday, December 10. Concord, state medical examinations.

Wednesday, December 11. Concord, state medical examinations.

Thursday, December 12. Plymouth, semi-annual examinations of State Normal School.

Friday, December 13. Goffstown, Woman's Club, address, "School Law."

Monday, December 23. Concord, University Club, address, "Educational Progress in New Hampshire."

Monday, December 30. Nottingham, Grange tenth anniversary, address, "Our Duty to Public Education."

1902.

Friday, January 3. Conway, Teachers' Institute and evening address, "Educational Conditions."

Monday, January 6. Seabrook, Teachers' Institute and evening address, "Democracy in Education."

Wednesday, January 8. Raymond, Teachers' Institute and evening address, "Equalization of School Privileges."

Friday, January 10. Derry, Teachers' Institute and evening address, "Educational Progress."

Tuesday, January 14. Westmoreland, evening address, "What shall We Do for Our Rural Schools?"

Wednesday, January 15. Walpole, Teachers' Institute and evening address, "Equalization of School Privileges."

Thursday, January 16. West Swanzey, evening address, "School Supervision."

Friday, January 17. Hillsborough Bridge, Contoocook Valley Teachers' Association and Institute, address, "School Supervision."

Tuesday, January 21. Greenfield, evening address, "Progress of Education."

Wednesday, January 22. Wilton, Teachers' Institute and evening address, "School Supervision."

Thursday, January 23. Newfields, evening address, "Democracy in Education."

Saturday, January 25. Somersworth, Police Court, case of Zervondacki.

Wednesday, January 29. Gilmanton Iron Works, evening address, "Equalization of School Privileges."

Friday, January 31. Plymouth, meeting of Normal School trustees.

Friday, January 31. Concord, evening meeting of Educational Council of New Hampshire.

Saturday, February 1. Concord, meeting of Educational Council of New Hampshire.

Saturday, February 1. Concord, meeting of Executive Committee of State Teachers' Association.

Friday, February 7. Concord, Merrimack Valley Teachers' Association.

Tuesday, February 11. Dover, grand jury of Strafford County, case of Zervondacki.

Wednesday, February 12. Warner, Teachers' Institute and evening address, "Equalization of School Privileges."

Friday, February 14. Portsmouth, Rockingham County Association and Institute.

Saturday, February 15. Rochester, Strafford County Teachers' Association.

Wednesday, February 19. Charlestown, Teachers' Institute and evening address, "Equalization of School Privileges."

Thursday, February 20. Langdon, "Equalization of School Privileges."

Tuesday, March 4. Gorham, address, "School Supervision."

Wednesday, March 12. Portsmouth, conference with South Hampton committee at request of town.

Thursday, March 13. Hudson, meeting of grange, "School Supervision."

Tuesday, March 18. Dover, Superior Court, State *vs.* Zervondacki.

Wednesday, March 19. South Hampton, conference of school board, Barnard trustees and special committee.

Thursday, March 20. Ossipee, Carroll County Superior Court. Appealed Tamworth attendance cases.

Saturday, March 22. Stratham, conference with school board.

Monday, March 24. Conference with Alton and Durham school boards.

Friday, March 28. Concord, state teachers' examinations.

Saturday, March 29. Concord, state teachers' examinations.

Tuesday, April 1. Concord, meeting of State Normal School trustees.

Tuesday, April 15. Walpole, organization of supervisory district of Walpole, Alstead, and Westmoreland.

Friday, April 25. Concord, High School Teachers' Institute.

Saturday, April 26. Concord, High School Teachers' Institute.

Monday, April 28. Exeter, Rockingham County Superior Court, State *vs.* Beaudet.

Friday, May 2. Dover, Strafford County Teachers' Association and Institute.

Wednesday, May 7. Manchester, investigation of medical registration.

Thursday, May 8. Londonderry, Pomona Grange, afternoon address, "Rural Schools."

Friday, May 9. Laconia, Winnepesaukee Teachers' Association and Institute.

Wednesday, May 14. Lancaster, Coös County Teachers' Association and Institute.

Thursday, May 15. Glen, conference with school board of Bartlett.

Friday, May 16. Littleton, Ammonoosuc Valley Teachers' Association and Institute.

Tuesday, May 20. Swanzey, address, "Rural Education."

Wednesday, May 21. Keene, Cheshire County Teachers' Association and Institute; address, "School Law."

Wednesday, May 21. Chesterfield, evening address, "School Law."

Friday, May 23. Reed's Ferry, Merrimack Valley Teachers' Association and Institute.

Tuesday, June 3. Durham, prize speaking New Hampshire College of Agriculture and the Mechanic Arts.

Tuesday, June 10. Concord, state medical examinations.

Wednesday, June 11. Concord, state medical examinations.

Friday, June 13. Dover, meeting of joint school board of Newmarket supervisory district.

Saturday, June 14. Nottingham, Flag Day celebration, address, "Work."

Thursday, June 19. Plymouth, State Normal School graduation.

Friday, June 20. Plymouth, State Normal School graduation; meeting of trustees; meeting of joint board; conference with special committee from Plymouth school district relative to removal of high school.

Friday, June 27. Concord, state teachers' examinations.

Saturday, June 28. Concord, state teachers' examinations.

August 11-22. Plymouth, Summer Institute, ten lectures on "School Law"; evening address, "Educational Progress in New Hampshire."

Monday, August 25 and 26. Plymouth, state teachers' examination.

Thursday, September 4. Hedding, Pomona Grange, address, "The Grange and the School."

Friday, September 19. Portsmouth, Executive Committee of State Teachers' Association.

Evening, Concord, annual meeting of the Educational Council of New Hampshire.

Saturday, September 20. Concord, Educational Council.

Tuesday, September 23. Bath and Haverhill, investigation of high school conditions.

Wednesday, September 24. Plymouth, meeting of Normal School trustees.

Saturday, September 27. Conference with School Board and truant officer of Somersworth.

INSTITUTE STATISTICS.

TOWNS REPRESENTED AT INSTITUTES, WITH
THE NUMBER OF TEACHERS AND SCHOOL
OFFICIALS IN ATTENDANCE, FROM AUGUST,
1900, TO JUNE, 1901.

	Number of Institutes.	Number of Teachers.	Number of School Officials.
Alton	2	11	2
Amherst	1	3	..
Andover	1	2	..
Antrim	1	7	1
Atkinson	2	3	..
Auburn	1	4	..
Barnstead	2	4	1
Barrington	2	3	..
Bath	2	14	1
Bedford	1	4	..
Belmont	2	20	2
Bennington	1	4	..
Benton	1	2	..
Berlin	1	27	3
Bethlehem	2	9	1
Boscawen	2	5	..
Bow	1	1	..
Bradford	1	1	..
Brentwood	1	2	..
Charlestown	2	10	..
Chester	1	1	..
Chichester	1	1	..
Claremont	2	20	..
Concord	1	56	..
Cornish	1	2	..

Dalton	2	2	..
Danbury	1	5	..
Danville	2	3	..
Deerfield	1	1	..
Dover	3	13 ²	..
Dublin	1	2	2
East Kingston	2	5	..
Enfield	1	2	..
Epping	1	7	..
Epsom	1	2	..
Exeter	1	3 ¹	..
Farmington	2	3 ⁰	2
Francestown	1	7	..
Franconia	2	8	..
Franklin	1	24	3
Fremont	1	2	..
Gilmanton	1	6	2
Goffstown	1	14	..
Gorham	1	13	2
Grafton	1	4	..
Greenland	1	5	..
Hampstead	1	4	1
Hampton	1	6	..
Hampton Falls	1	4	..
Hanover	1	14	..
Haverhill	2	26	1
Henniker	1	13	1
Hill	2	4	..
Hillsborough	1	17	3
Hooksett	1	9	..
Hopkinton	1	5	1
Jaffrey	1	10	2
Jefferson	1	3	1
Kensington	2	3	..
Kingston	2	4	..
Laconia	2	29	..
Lancaster	1	10	..
Landaff	2	4	..

Lebanon	1	18	..
Lisbon	2	25	..
Littleton	2	38	..
Londonderry	1	1	..
Lyman	2	3	..
Lyme	2	3	..
Madbury	2	4	..
Manchester	2	135	..
Meredith	1	1	..
Merrimack	1	5	..
Milan	1	8	1
Middleton	3	3	..
Milton	2	10	1
Nashua	1	60	..
New Boston	2	3	..
Newbury	1	1	..
New Durham	2	6	..
Newfields	1	4	..
Newington	1	3	..
Newmarket	2	19	..
Newport	2	20	..
Newton	2	8	1
Northfield	2	6	1
North Hampton	1	4	..
Northumberland	1	6	..
Ossipee	1	2	..
Pelham	1	1	..
Pembroke	1	9	..
Peterborough	1	9	2
Pittsfield	2	28	2
Plainfield	1	4	..
Plaistow	2	6	2
Portsmouth	1	1	..
Randolph	1	3	..
Raymond	1	4	..
Rochester	3	99	1
Rollinsford	3	10	1
Rye	1	2	..

Rindge	1	3	..
Salem	1	5	1
Sanbornton	2	7	..
Seabrook	1	4	..
Shelburne	1	1	..
Somersworth	3	63	4
South Hampton	2	7	1
Stark	1	3	..
Strafford	1	6	..
Stratford	1	1	1
Stratham	1	5	..
Sunapee	1	12	..
Sutton	1	1	..
Tamworth	1	2	..
Tilton	2	7	..
Troy	1	6	..
Tuftonborough	1	1	..
Wakefield	1	9	..
Warner	1	1	..
Washington	1	4	..
Webster	1	1	..
Whitefield	1	11	..
Winchester	1	8	..
Windham	1	1	1
Wolfeborough	1	20	..

LIST OF INSTRUCTORS AND SUBJECTS AT INSTITUTES FROM AUGUST, 1900, TO JUNE, 1901.

Elementary Science: Alice L. Aldrich, one period; Eva M. Godfrey, one period; Sarah E. Brassill, two periods; E. L. Bigelow, one period; Abbie M. Sanger, one period; Prin. John G. Thompson, one period.

Arithmetic: Prin. J. E. Klock, six periods; Supt. Clarence A. Brodeur, two periods; Supt. George H. Whitchee, three periods; Anna Braley, one period.

Reading : Supt. Ernest L. Silver, one period ; Prin. F. L. V. Spaulding, one period ; Supt. Clarence A. Brodeur, one period ; Prin. J. E. Klock, four periods ; Prin. John G. Thompson, one period.

Geography : Maud Starling, three periods ; Prin. J. E. Klock, four periods ; Archer C. Bowen, one period ; Supt. Clarence A. Brodeur, one period.

History : Maud Starling, two periods ; Supt. Clarence A. Brodeur, six periods ; Supt. Channing Folsom, one period ; Prin. H. K. Whittaker, one period.

English : Supt. Clarence A. Brodeur, two periods ; Mary E. Carter, one period.

Penmanship : Julia Talbot, one period.

How shall we Improve our Ungraded Schools ? Supt. George H. Whitcher, seven periods.

Supervision from Teacher's Standpoint : Supt. Clarence A. Brodeur, three periods.

Suggestions to Teachers : Supt. Channing Folsom, five periods.

Temperament : Prin. J. E. Klock, three periods.

Spelling : Prin. J. E. Klock, two periods.

Child Study : Prin. J. E. Klock, one period.

The Ungraded School : May F. Grout.

The World as a Whole : Prin. J. E. Klock.

Hygiene in the Schools : Dr. M. S. Woodman.

Physical Training in the Schools : E. E. Leighton, LL. B.

The Needs of the Teacher : Mary Parsons.

Shall we Worry ? Frederick G. Getchell.

Drawing in our Public Schools : Mr. A. G. Randall.

A Glimpse of Holland Life : Emily H. Ham.

Extent to which affections of Ear and Eye prevail among School Children : Dr. Arthur F. Sumner, two periods.

Fact and Fancy : Prin. O. H. Toothaker.

What the High School expects from the Grades : Newton D. Clark.

The Hygiene of School Children : Dr. N. H. Scott.

A Familiar Talk to Teachers : Mr. A. H. Rust.

High School Advantages for all: Supt. Geo. H. Whitcher.

Music as a Factor in Education: Leora A. Wiard.

Memories of Fontainebleau: Lotta E. Neal.

The Teaching of Modern Languages: Bertha Vogel.

The Pupil and Teacher as Accompanist: Dr. A. E. Winship.

Longfellow and Lowell—a contrast: Dr. A. E. Winship.

The Relation of High and Grammar Schools: Supt. Geo. I. Aldrich.

How to promote Individual Interests without sacrificing the Benefit of Class Work: Supt. C. F. Carroll.

The Lower and Higher Functions of the Course of Study: Geo. H. Martin.

How Complete a Knowledge of English should a Pupil possess on leaving the Grammar Grade? Elwin Damon.

Physiology in Ungraded Schools: Supt. Charles W. Bickford.

School Discipline: Supt. Frank H. Pease.

Promotions: William F. Coggins.

Aids to Mental Culture: Mary Eastman.

Calisthenics: Howard P. Harding.

Friends or Foes: Pres. Chas. S. Murkland.

The Parent and the Teacher: Maria Baldwin.

School Management: Grenville T. Fletcher.

The Value of History: Charles R. Corning.

EVENING LECTURES.

High Schools for the Masses: Dr. H. H. Horne, two periods; Supt. Channing Folsom, two periods.

Education, Its Motive, Means and End: Dr. H. H. Horne, one period.

School Supervision: Supt. Channing Folsom, three periods.

Educational Conditions: Supt. Channing Folsom, three periods.

The Schools of the Twentieth Century: Supt. George I. Aldrich, two periods.

SUMMER INSTITUTE, PLYMOUTH, AUGUST 15-28, 1900.

INSTRUCTORS.

History: Clarence A. Brodeur, Superintendent of Schools, Chicopee, Mass.

Arithmetic: George I. Aldrich, Superintendent of Schools, Brookline, Mass.

Geography: Philip Emerson, Principal Cobbet School, Lynn, Mass.

English: Robert C. Metcalf, Supervisor of Schools, Boston.

Composition: Mary E. Whitten, Concord (N. H.) High School.

Music: Enoch W. Pearson, Supervisor of Music, Philadelphia, Pa.

Drawing: Nathaniel L. Berry, Supervisor of Drawing, Newton, Mass.

Desk Work: Herbert W. Lull, Superintendent of Schools, Quincy, Mass.

Nature Study: Mary C. Dickerson, Rhode Island State Normal School.

Primary Methods: Anna W. Braley, Principal Normal Training School, Fall River, Mass.

Civics: Superintendent Brodeur.

Current Events: Dr. T. W. Harris, Superintendent of Schools, Keene, N. H.

History of Education: Dr. Harris.

School Management: Superintendent Aldrich.

Psychology: Maud Slye, Rhode Island State Normal School.

PROGRAMME.

First Week.

- 9.45. Opening exercises.
- 9.00. Mr. Pearson, Music.
- 9.45. Mr. Metcalf, English; Mr. Brodeur, History.
- 10.30. Miss Dickerson, Nature Study; Miss Slye, Psychology.
- 11.15. Mr. Aldrich, Arithmetic; Mr. Lull, Desk Work.
- 2.00. Miss Braley, Primary Methods; Miss Whitten, English Composition.
- 2.45. Mr. Emerson, Geography; Mr. Harris, Current Events.
- 9-12. Mr. Berry, Drawing.

Second Week.

- 8.45. Opening exercises.
- 9.00. Mr. Pearson, Music.
- 9.45. Miss Braley, Primary Methods; Mr. Brodeur, Civics.
- 10.30. Mr. Metcalf, English; Mr. Harris, History of Education.
- 11.15. Mr. Aldrich, School Management; Miss Whitten, English Composition.
- 2.00. Miss Dickerson, Nature Study; Prin. James E. Klock, New Hampshire State Normal School, Pedagogy.
- 2.45. Mr. Aldrich, Arithmetic.
- 9-12. Mr. Berry, Drawing.

Evening Lectures.

Wednesday, August 15, Hon. Frank A. Hill, Secretary of Massachusetts State Board of Education, "Ideals for Teachers in the Light of Modern Demands."

Friday, August 17, Mr. Pearson, "How Music Talks."

Monday, August 20, State Superintendent Folsom, "School Supervision."

Wednesday, August 22, President Charles S. Murkland, N. H. College of Agriculture and the Mechanic Arts.

Friday, August 24, Hon. W. W. Stetson, Superintendent of Education, Maine, "What Next."

Tuesday, August 28, President William J. Tucker, Dartmouth College.

INSTITUTE FOR HIGH SCHOOL TEACHERS, HELD AT HIGH SCHOOL BUILDING, CONCORD.

Friday and Saturday, April 26 and 27, 1901.

PROGRAMME.

Friday Afternoon.

- 1.45. Devotional exercises conducted by Rev. Louis H. Buckshorn.
- 2.00. "Electives." Principal A. E. Tuttle, High School, Haverhill, Mass.
- 3.00. "Agriculture and the School Teacher." Prof. Charles W. Burkett.
- 4.00. "Science in the High School." Dr. Lyman C. Newell, State Normal School, Lowell, Mass.

Evening Lecture.

(Representatives' Hall, State House.)

- 8.00. "The Proper Service of the High School." Principal Ray
Greene Huling, High School, Cambridge, Mass.
- 9.00. Meeting of Educational Council of New Hampshire.

Saturday Morning.

- 9.00. "The Teaching of History in Secondary Schools." Prof.
William Macdonald, Bowdoin College.
- 10.00. "The Preparation and Training of High School Teachers."
Prof. Paul H. Hanus, Harvard College.
- 11.00. "English." Prof. Barrett Wendell, Harvard College.

The following topics were proposed for consideration :

What Should the High School Demand of the Grammar School?

What Should the College Expect of the High School?

The Place of the Dull Pupil in the High School.

Manual Training.

Physical Culture.

Uniform Requirement for Graduates from all the High Schools of
the State.

Ways in which Dartmouth College can be of Assistance to the
High School.

Attendance and Punctuality in High School.

Penmanship in High School.

INSTITUTE STATISTICS.

TOWNS REPRESENTED AT INSTITUTES, WITH
THE NUMBER OF TEACHERS AND SCHOOL
OFFICIALS IN ATTENDANCE, FROM AUGUST,
1901, TO JUNE, 1902.

	Number of Institutes.	Number of Teachers.	Number of School Officials.
Allenstown	1	3	..
Alstead	2	6	..
Alton	1	4	..
Amherst	2	13	..
Antrim	1	11	3
Atkinson	1	1	..
Auburn	2	4	..
Barnstead	1	1	..
Barrington	1	4	..
Bath	2	8	..
Bedford	1	6	..
Belmont	1	10	1
Bennington	1	2	..
Berlin	3	30	1
Bethlehem	3	13	2
Bow	1	1	..
Bradford	2	4	..
Brookline	1	2	..
Candia	2	7	1
Carroll	2	6	1
Centre Harbor	1	5	.
Charlestown	2	9	1
Chester	2	4	1

Chesterfield	2	10	..
Claremont	1	19	..
Clarksville	1	1	..
Colebrook	1	5	..
Columbia	1	1	..
Conway	1	18	2
Cornish	1	1	..
Dalton	3	5	..
Danville	1	2	..
Deerfield	1	1	..
Derry	1	18	3
Dover	2	91	..
Dublin	3	13	..
Durham	2	12	3
East Kingston	2	3	..
Epping	3	13	1
Exeter	3	16	1
Farmington	2	17	1
Fitzwilliam	2	12	..
Fracesttown	1	3	1
Franconia	2	9	..
Franklin	1	21	..
Fremont	1	1	..
Gilford	1	6	1
Gilmanton	1	3	..
Gilsum	2	3	..
Goffstown	2	5	..
Gorham	2	11	..
Greenfield	1	1	..
Greenland	2	6	..
Greenville	1	1	..
Hampstead	1	2	..
Hampton	2	13	..
Hampton Falls	1	4	..
Harrisville	2	4	..
Haverhill	2	11	1
Henniker	2	11	..

Hill	1	2	. .
Hillsborough	1	17	2
Hinsdale	1	7	. .
Hooksett	1	2	. .
Hopkinton	2	8	2
Hudson	2	7	1
Jefferson	2	15	1
Keene	2	92	. .
Kensington	1	1	. .
Kingston	2	4	. .
Laconia	1	34	2
Lancaster	2	51	1
Landaff	1	2	. .
Lee	1	1	. .
Lisbon	2	21	. .
Litchfield	1	2	. .
Littleton	2	41	. .
Londonderry	1	4	1
Lyman	2	2	1
Lyndeborough	1	1	. .
Madbury	1	1	. .
Manchester	1	114	. .
Marlborough	2	16	. .
Marlow	1	2	. .
Meredith	1	6	2
Merrimack	2	15	. .
Middleton	1	3	. .
Milford	1	19	. .
Milton	1	2	. .
Mont Vernon	1	1	. .
Nashua	1	58	. .
Nelson	1	1	. .
New Boston	1	1	. .
Newcastle	1	1	. .
New Durham	1	2	. .
Newfields	1	4	. .
New Hampton	1	2	. .

Newington	2	4	..
Newmarket	3	39	2
Newport	1	4	..
Newton	2	5	1
Northfield	1	3	..
North Hampton	2	8	..
Northumberland	2	19	..
Nottingham	1	1	..
Ossipee . . . . .	..	..	1
Pelham	1	2	..
Pembroke	1	4	..
Pittsburg	2	15	..
Pittsfield	1	5	..
Portsmouth	1	64	..
Randolph	2	2	..
Raymond	2	11	2
Richmond	2	4	..
Rochester	2	60	..
Rollinsford	2	9	..
Rye	2	8	..
Rindge	1	2	..
Salem	1	11	1
Salisbury . . . . .	..	..	1
Sanbornton	1	3	..
Sandwich	1	1	..
Seabrook	2	12	..
Somersworth	2	45	2
South Hampton	1	4	1
Stark	1	1	..
Stewartstown	1	3	..
Stoddard	2	4	..
Strafford	1	4	..
Stratford	1	3	..
Stratham	3	4	..
Sullivan	3	8	..
Sunapee	1	1	..
Surry	1	3	..

Swanzey	2	21	..
Tamworth	1	5	2
Tilton	1	11	..
Troy	3	16	..
Wakefield	1	2	..
Walpole	3	32	1
Warner	2	16	1
Warren	1	1	..
Westmoreland	2	17	..
Whitefield	2	25	..
Wilton	1	20	..
Winchester	3	40	5
Windham	1	3	2
Wolfeborough	1	7	..

LIST OF INSTRUCTORS AND SUBJECTS AT INSTITUTES FROM AUGUST, 1901, TO JUNE, 1902.

Prin. J. E. KLOCK, State Normal School, Plymouth.

Arithmetic, eight periods.

Temperament, two periods.

Geography, six periods.

Reading, twelve periods.

The Child's Place in the Scheme of Education, one period.

Supt. GEORGE H. WHITCHER.

Geography, six periods.

Arithmetic, three periods.

How Shall We Improve Our Ungraded Schools? Five periods.

How Nature Study Aids Geography Teaching, one period.

Supt. JAMES H. FASSETT.

Reading, one period.

History, two periods.

Supt. H. C. MORRISON.

Arithmetic, two periods.

Discipline, two periods.

A Working System of Gymnastics in Grades, one period.

Prof. CLARENCE M. WEED.

* Nature Study, seventeen periods.

Prin. A. B. CRAWFORD.

Latin, two periods.

Geometry, two periods.

Prin. CLARENCE A. BRODEUR.

History, three periods.

Supervision from Teachers' Standpoint, three periods.

Supt. CHANNING FOLSOM.

Hints to Teachers, nine periods.

School Law, one period.

School Statistics, one period.

WALTER S. PARKER.

Colonel Parker's Work in Massachusetts, two periods.

History, one period.

JAMES C. SIMPSON.

Meaning of Col. Parker's Work to the Teachers and
Schools of New Hampshire, two periods.

Penmanship, one period.

MABEL C. BRAGG.

The Story Hour, one period.

English, one period.

MABEL HILL.

History, two periods.

PHILIP W. AYERS.

Forestry, three periods.

MAUD STARLING.

Reading, one period.

Arithmetic, one period.

Geography, one period.

FRANK M. GILLEY.

Physics, two periods.

ROBERT C. METCALF.

English, two periods.

The following instructors gave one period each in the several subjects:

ROBERT A. RAY, Arithmetic.

WILLIAM C. BATES, Arithmetic.

LILLY P. SHEPARD, Geography.

JEAN M. ASHTON, Geography.

Supt. T. W. HARRIS, English.

WINNIFRED HARMON, History.

DOVE E. MITCHELL, Primary Methods.

AUSTIN H. FITTS, Civics.

THOMAS ALLEN, Thoroughness.

H. G. DIBBLE, Humidity and Hygiene, Our Friends.

RUTH PARKER, Physical Culture.

F. B. WIGHT, The Public Library and Supplementary Books.

S. W. ROBERTSON, Does the High School Give an Adequate Training for Business Life?

MARTHA ATKINSON, Literature in the Grades.

JOHN G. THOMPSON, English Grammar in the Grades.

WALTER P. BECKWITH, How a Teacher Can Keep Himself Alive.

GEORGE I. ALDRICH, Col. Parker as a Leader.

FRED GOWING, Importance of Local History.

LESLIE L. CLEVELAND, High School Management.

FRED L. V. SPAULDING, Algebra.

Hon. D. C. REMICK, The Education of our Feeble-Minded Children.

VRYLING W. BUFFUM, A Talk About Birds.

Rev. E. A. KEEP, The Ethical Element in Teaching.

EVA M. FISHER, School Government.

Supt. C. W. BICKFORD, Observations on Chicago Schools.

Rev. A. E. WINSHIP, Col. Parker as a Leader.

Miss E. M. FARMAN, A Trip Across the Continent.

EVENING LECTURES.

Supt. CHANNING FOLSOM :

- Educational Conditions, four periods.
- Democracy in Education, one period.
- Equalization of School Privileges, three periods.
- Educational Progress, one period.
- District Supervision, three periods.

Dr. H. H. HORNE :

- The Method of Teaching, one period.
-

SUMMER INSTITUTE, PLYMOUTH, AUGUST 12-24, 1901.

INSTRUCTORS.

History : Clarence A. Brodeur, Superintendent of Schools, Chicopee, Mass.

Geography : Philip Emerson, Principal Cobbett School, Lynn, Mass.

Elementary English : Della J. Long, Helena, Mont.

Music : Enoch W. Pearson, Supervisor of Music, Philadelphia, Pa.

Drawing : Nathaniel L. Berry, Supervisor of Drawing, Newton, Mass.

Desk Work : Henry Whittemore, Principal Massachusetts State Normal School, Framingham, Mass.

English Composition : Eleanor H. Abbott, Massachusetts State Normal School, Lowell, Mass.

Nature Study : Prof. Clarence M. Weed, N. H. College of Agriculture and the Mechanic Arts, Durham, N. H.

Primary Methods : Anna W. Braley, Principal Normal Training School, Fall River, Mass.

Arithmetic : Superintendent Brodeur.

History of Education : Dr. T. W. Harris, Superintendent of Schools, Keene, N. H.

Psychology and Pedagogy : Dr. Herman H. Horne, Dartmouth College.

PROGRAM.

First Week.

- 8.45. Opening exercises.
- 9.00. Mr. Horne, Psychology.
- 9.45. Mr. Pearson, Music.
- 10.30. Mr. Weed, Nature Study.
- 11.15. Miss Braley, Primary Methods; Mr. Brodeur, Arithmetic.
- 2.00. Miss Long, Elementary English; Mr. Folsom, School Law.
- 2.45. Mr. Horne, Pedagogy.
- 9-12. Mr. Berry, Drawing.

Second Week.

- 8.45. Opening exercises.
- 9.00. Mr. Harris, History of Education.
- 9.45. Mr. Pearson, Music.
- 10.30. Miss Long, Elementary English; Miss Abbott, Higher English.
- 11.15. Mr. Brodeur, History; Mr. Whittemore, Desk Work.
- 2.00. Miss Braley, Primary Methods; Mr. Emerson, Geography.
- 2.45. Mr. Brodeur, Arithmetic; Mr. Weed, Nature Study.
- 9-12. Mr. Berry, Drawing.

Evening Lectures.

Wednesday, August 14. Dr. Horne, "Progress in Psychology during the Nineteenth Century."

Friday, August 16. Mr. Pearson.

Friday, August 23. Pres. Wm. J. Tucker, Dartmouth College.

AN INSTITUTE FOR HIGH SCHOOL TEACHERS, HELD
AT THE HIGH SCHOOL BUILDING, CONCORD.

Friday and Saturday, April 25 and 26, 1902.

PROGRAM.

Friday Afternoon.

- 1.45. Devotional exercises, conducted by Rev. John Vannevar.
- 2.00. "The Place of Rhetoric in the High School." President George C. Chase, Bates College, Lewiston, Me.
- 3.00. "The Practicability of the Inductive Method of Teaching Chemistry." John W. Dow, Roxbury (Mass.) High School.
- 4.00. "Selection in History Teaching." Miss Blanche E. Hazard, Rhode Island Normal School, Providence.

Evening Lecture.

(Representatives' Hall, State House.)

- 8.00. "Economy in the Use of Educational Capital." President William J. Tucker, Dartmouth College, Hanover.

Saturday Morning.

- 9.00. "School Management." Professor H. H. Horne, Dartmouth College.
- 10.00. "Beginner's Latin." Principal William C. Collar, Roxbury (Mass.) Latin School.
- 11.00. "A Solution of a Group of Administrative Problems." Principal Charles F. Harper, Quincy (Mass.) High School.

TABLE SHOWING STATISTICS OF INSTITUTES FROM AUGUST, 1900, TO JUNE, 1901.

Number.	Town.	County.	Date.	Towns represented.	Teachers in attendance.	School officers in attendance.	Evening attendance.	Cost.
1	Lisbon	Grafton	November 2	12	88	3	80	\$25.25
2	West Lebanon	Grafton	November 23, 24	7 in N. H.	100	11	200	27.69
3	Somersworth	Strafford	December 7	11	138	11	.....	1.95
4	Exeter	Rockingham	December 14	27	136	.....	.....	31.28
5	Hillsborough	Hillsborough	January 11	12	80	8	60	35.51
6	Wolfeborough	Carroll	January 25	5	38	.....	90	46.06
7	Pittsfield	Merrimack	February 4	4	31	3	150	46.07
8	Rochester	Strafford	February 21	8	109	1	.....	3.00
9	Plaistow	Rockingham	March 8	12	33	7	28	46.86
10	Concord (High School)	Merrimack	March 26, 27	28	86	.....	125	115.74
11	Sunapee	Sullivan	April 30	6	49	.....	30	52.98
12	Manchester	Hillsborough	May 3	16	321	.....	.....	124.69
13	Berlin	Coos	May 10	10	85	8	80	60.27
14	Belmont	Belknap	May 15	9	50	5	.....	40.03
15	Dover	Strafford	May 17	15	174	5	.....	13.80
16	East Jaffrey	Cheshire	May 22	5	37	4	51	53.80
17	Franklin	Merrimack	May 24	12	87	3	.....	91.27
<hr/>								
Day Institutes total				1,642	58	.....	897	\$822.25
Summer Institute, Plymouth				37	108	.....	.....	1,211.80
<hr/>				<hr/>				
				1,750	.....	.....	.....	\$2,034.05

TABLE SHOWING STATISTICS OF INSTITUTES FROM AUGUST, 1901, TO JUNE, 1902.

Number.	Town.	County.	Date.	Towns represented.	Teachers in attendance.	School officers in attendance.	Evening attendance.	Cost.
1	Keene....	Cheshire....	October 25	19	135	.....	.....	\$30.10
2	Pittsburg....	Coccs....	October 30	4	30	.....	40	74.72
3	Whitefield....	Coccs....	November 1	10	101	11	50	31.75
4	Lisbon....	Grafton....	November 8	8	59	2	50	19.00
5	Somersworth....	Strafford....	December 6, 7	10	132	9	.....	76.68
6	Conway....	Carroll....	January 3	6	43	10	65	50.40
7	Seabrook....	Rockingham....	January 6	13	50	3	35	35.01
8	Raymond....	Rockingham....	January 8	12	48	5	67	35.36
9	Derry....	Rockingham....	January 10	12	68	9	70	48.81
10	Walpole....	Cheshire....	January 15	11	79	2	61	63.22
11	Hillsborough....	Hillsborough....	January 17	11	57	8	36	32.84
12	Wilton....	Hillsborough....	January 22	8	55	.....	75	35.85
13	Warner....	Merrimack....	February 11, 12	7	44	5	52	46.43
14	Portsmouth....	Rockingham....	February 14	17	135	3	.....	28.80
15	Charlestown....	Sullivan....	February 19	4	34	1	40	57.81
16	Concord (High School)....	Merrimack....	February 25, 26	39	94	4	125	105.95
17	Dover....	Strafford....	April 2	18	183	.....	.....	58.62
18	Lancaster....	Belknap....	May 9	13	119	7	.....	40.38
19	Lancaster....	Coccs....	May 14	13	83	.....	.....	55.70
20	Littletton....	Grafton....	May 16	11	72	.....	.....	78.00
21	Keene....	Cheshire....	May 21	20	148	.....	.....	54.75
22	Merrimack....	Hillsborough....	May 23	15	230	.....	.....	97.62
Day Institutes total				.....	2,002	79	766	\$1,157.83
Summer Institutes				.....	155	9	.....	877.15
				.....	2,157	88	.....	\$2,034.98

SCHOOL OFFICERS.

CHANNING FOLSOM, *State Superintendent of Public Instruction.*

Superintendents of Cities and Towns.

CHARLES W. BICKFORD.....	Manchester.
JAMES H. FASSETT.....	Nashua.
LOUIS J. RUNDLETT	Concord.
FRANK H. PEASE.....	Dover.
HENRY C. MORRISON.....	Portsmouth.
THADDEUS W. HARRIS.....	Keene.
ERNEST L. SILVER.....	Rochester.
JOSEPH H. BLAISDELL.....	Laconia.
CHARLES TRACY.....	Claremont.

Superintendents of Supervisory Districts.

HENRY B. STEARNS.....	Marlborough, Troy, Fitzwilliam, Dublin.
GEORGE H. WHITCHER.....	Durham, Alton, Newmarket, Stratham.
EDGAR E. HULSE.....	Salem, Hampstead, Epping, Hudson.
FRANK H. BENEDICT.....	Pittsfield, Pembroke.
HENRY C. SANBORN.....	Franklin, Penacook.
CLINTON J. RICHARDS.....	Walpole, Westmoreland, Alstead.

TOWN AND CITY SCHOOL COMMITTEES.

TOWN.	NAME.	Post-office address when different from town.
Acworth	Almon E. Clark..... Lyman A. Young..... Hiram N. Hayward.....	East Acworth. South Acworth.
Albany.....	Onslow S. Smith..... Chancie J. Chamberlain..... William C. Chase.....	Passaconaway. Conway. Conway.
Alexandria	A. S. Bucklin..... Everett Tucker..... Howard E. Wells.....	Bristol, Route No. 1.
Allenstown	Henry C. Sargent..... John J. McDonough..... Jennie E. Blodgett.....	Suncook. Suncook. Suncook.
Alstead	George A. Mayo..... C. H. Cooke..... Rev. H. S. Ives.....	East Alstead. Walpole.
Alton	Clinton J. Richards, Supt. Charles H. McDuffee..... Charles H. Downing..... Amy E. Place.....	Alton Bay. Alton Bay. Durham.
Amherst	George H. Whitchee, Supt. Rev. Alfred J. McGown..... William W. Sloan.....	
Andover	Mrs. S. E. Dodge..... Mrs. Carrie E. Carr..... George H. McKeage..... John H. Merrill.....	East Andover.
Antrim	Abner B. Crombie..... Dennis W. Cooley..... H. W. Eldridge.....	
Ashland	C. W. Cummings..... George W. Lambert..... Mrs. John Blanchard.....	Plymouth.
Ashland (Special)....	John E. Morrison..... Willis F. Hardy..... Ora A. Brown..... Charles H. Pattee..... Dana W. Carey..... John H. Morrill.....	
Atkinson.....	Herbert N. Sawyer..... George P. Dow..... George N. Sawyer.....	Haverhill, Mass., Box 688. Atkinson Depot.
Auburn	Albert E. Davis..... Freeman A. Babbitt..... Ella F. Brown.....	
Barnstead	B. Frank Dow..... Horace N. Colbath..... Enos George.....	North Barnstead. Centre Barnstead.
Barrington	Dr. R. J. Ward..... Flavius J. Berry..... Charles H. Chesley.....	East Barrington. Rochester, Route No. 1. South Barrington.
Bartlett.....	Austin L. Stillings..... Albert Eastman..... Walter Pitman.....	Glen. Intervale. Lower Bartlett.
Bartlett (Special)....	Frank M. Littlefield..... Clarence H. George..... James H. Mead.....	
Bath	Charles M. Hibbard..... Waterman W. Chamberlin..... Merrill Tewksbury.....	Woodsville, Route No. 1. Woodsville, Route No. 1. Swiftwater.
Bath (Special).....	Dr. George E. Davenport..... Mary E. Jackman..... Hosmer W. Smith.....	

TOWN.	NAME.	Post-office address when different from town.
Bedford	Mary E. Manning..... Arthur W. Holbrook..... William M. Patten.....	Manchester, Route No. 2.
Belmont.....	Joseph Plumer..... Rev. E. S. Moulton..... F. A. Currier.....	Laconia. East Tilton.
Bennington	Arthur W. Pierce..... Henry W. Wilson..... Calvin S. Brown.....	
Benton.....	Lebena H. Parker..... F. M. Tyler..... O. L. Mann.....	
Berlin	Columbus P. Kimball..... Dr. H. W. Johnson..... Orton B. Brown.....	
Bethlehem	Charles E. Baker..... Warren E. Burt..... Austin A. Balch.....	Littleton. Apthorp. Pierce's Bridge.
Bethlehem (Special)...	Miss Cynthia A. Kidder..... Willard H. Presby..... Henry P. Smith.....	
Boscawen	Joseph Eastman..... Miss Lizzie M. Choate..... W. R. Wheeler.....	
Boscawen (Special)...	Edson H. Mattice..... Benjamin F. Butler..... Rev. J. E. Whiteley.....	Penacook. Penacook. Penacook.
Bow	George W. Short..... Charles B. Rogers..... John H. Burroughs.....	Hooksett. Hooksett. Concord, Route No. 2.
Bradford	Byron A. Cressy..... Frank O. Melvin..... Milton O. Craig.....	
Bradford (Special)...	G. K. Stratton..... Mrs. H. K. Martin..... Dr. D. G. Underwood.....	
Brentwood	Mary O. Caverly..... Emma Sinclair..... E. Christine Swazey.....	Brentwood Corner. Exeter.
Bridgewater.....	S. Ivanette Gray..... John E. S. Fifield..... S. S. Fletcher.....	Plymouth, Route No. 2. Plymouth, Route No. 2.
Bristol	Charles F. Huckins..... LaForest S. Ballou..... C. W. Fling.....	
Bristol (Special).....	F. H. Ackerman..... Mrs. F. Fields..... Mrs. D. B. Weymouth.....	
Brookfield	Mrs. O. B. French..... Albro Wells..... John E. Lang.....	Wakefield.
Brookline	Charles Colman..... Charles Willey..... George W. Bridges.....	
Campton	E. S. Whitcomb..... A. A. Hall..... George D. Pattee.....	Plymouth, Route No. 3. Campton Village. Campton Village.
Canaan.....	Lewis A. Eaton..... H. G. Robie..... Walter H. Swett.....	Canaan Street. Canaan Center.
Canaan (Special).....	George W. Chase..... Dr. Frank A. Bogardus..... Oscar L. Rand..... George H. Gordon.....	

TOWN.	NAME.	Post-office address when different from town.
Candia.....	Adelaide M. Turner..... Mrs. Lucie A. E. Holt..... Eugene W. Healey.....	East Candia. Candia, Route No. 1.
Canterbury.....	Mrs. Ida M. Kimball..... Olwyn W. Dow..... W. W. Wheeler.....	Uplands. Canterbury Centre. Twin Mountains.
Carroll.....	Lovell Hudson..... George Applebee..... Dana Brown.....	Box 104, Meadows. Twin Mountains.
Centre Harbor.....	Smith F. Emery..... Frank H. Morse..... Mrs. Elena B. C. Smith.....	Ashland.
Charlestown.....	Stephen T. Searle..... Mrs. Louise G. Symonds..... Willifred E. Hunt.....	North Charlestown.
Chatham.....	Chester C. Eastman..... Bessie P. Walker..... Perley Binford.....	South Chatham. Chatham Centre.
Chester.....	J. Wallace Chesbro..... John M. Webster..... Mrs. Lizzie S. Hook.....	
Chesterfield.....	Frank L. Houghton..... Ella S. Puffer..... Richard T. Cobb.....	West Chesterfield. Spofford.
Chichester.....	Harry S. Kelley..... H. B. Langley..... Jeremy L. Sanborn.....	Concord, Route No. 7.
Claremont.....	W. W. Cushman..... John D. Ayer..... Dr. H. C. Sanders, Jr..... <i>Charles A. Tracy, Supt.</i>	
Clarksville.....	Horace Wells..... Albert G. Coates..... Charles L. Fulton.....	Beecher Falls, Vt. Pittsburg.
Colebrook.....	Flora B. Woodrow..... Irving A. Woodrow..... Allen Forbes.....	
Colebrook (Special)..	Walter Drew..... W. E. Drew..... Benjamin F. Drew..... Darwin Lombard..... S. R. M. Ramsay..... H. M. Leavitt.....	
Columbia.....	Charles E. Martin..... Mrs. Delia Sims..... Mrs. Kate J. Parkhurst..... George T. Abbott.....	Columbia. Columbia Bridge.
Concord.....	Fales P. Virgin..... Albert A. Saltmarsh..... Charles R. Corning..... Susan J. Woodward..... Susan C. Bancroft..... John C. Ordway..... John M. Mitchell..... Edward N. Pearson..... Rev. John Vannevar..... Dr. G. M. Kimball..... George H. Moses..... <i>L. J. Rundlett, Supt.</i>	Concord, Route No. 5. Box 557.
Concord (Union Dis- trict).....	Dr. H. C. Holbrook..... Ira C. Phillips..... Ernest Prescott..... <i>Henry C. Sanborn, Supt.</i>	
Concord (Penacook District).....	Dr. C. P. Buzzell..... Mrs. Ellen M. Mason..... Mrs. Abbie M. D. Blouin.....	Franklin Falls. North Conway. Center Conway.

TOWN.	NAME.	Post-office address when different from town.
Cornish.....	George L. Denning..... Josiah Davis.....	Windsor, Vt. Cornish Flat.
Croydon.....	Amy I. Hilliard..... Charles O. Hall..... C. H. Forehand.....	South Cornish. Croydon Flat.
Dalton.....	Horace P. Hall..... Charles E. Swasey..... Fannie Aldrich.....	Littleton. Scott's.
Danbury.....	George W. Quimby..... Arthur R. Ford..... Frank W. Flanders.....	Whitefield.
Danville.....	Edward A. Farnum..... Mrs. Emma L. Towle..... Fred C. Quimby.....	North Danville. South Danville.
Deerfield.....	Clarence M. Collins..... C. S. King..... Oscar J. Chase.....	South Danville. Raymond, Route No. 1. Deerfield Center.
Deering.....	John L. Ladd..... Dennis E. Chase..... George F. Ellsworth.....	107 Stoughton st, Dorches- East Deering. [ter, Mass.
Derry.....	Charles E. Brown..... Rev. R. T. Wilton..... George J. Choate.....	Hillsborough Bridge. East Derry. West Derry.
Derry (Adams Dis- trict).....	Rev. F. C. Saure..... Mary A. Morse..... Thomas A. Adams.....	East Derry. East Derry. East Derry.
Derry (No. 2) ...	Carrie S. Davison..... Alice M. Hardy..... Dr. E. R. Angell.....	East Derry.
Dorchester.....	George Webster..... Iiilla Fellows..... Cyrille E. Lebrun.....	East Derry. Cheever.
Dover.....	Azro H. Schoolcraft..... Rev. George E. Hall..... James H. Southwick.....	Cheever.
	George D. McDuffee..... George G. Welch..... George J. Foster.....	
	Edwin S. Tasker..... Henry E. Shattuck..... Charles A. Fairbanks.....	
	Benjamin F. Nealley..... John E. Anthes..... Patrick W. Murphy.....	
	Dr. William H. Dyer..... Clarence I. Hurd..... George E. Buzzell.....	
	Andrew Killoren..... <i>Frank H. Pease, Supt.</i> Dr. Curtis A. Wood.....	
Dublin.....	James Allison..... Thomas Lynch..... <i>Henry B. Stearns, Supt.</i>	
Dummer.....	Mrs. J. R. Wentworth..... George S. Twitchell..... Mrs. C. N. Bickford.....	Marlborough. Milan Corner. Crystal.
Dunbarton.....	James E. Stone..... Annie M. Burnham..... Mrs. J. K. Page.....	Concord, Route No. 2. Concord, Route No. 2. Goffstown, Route No. 1.
Durham.....	Clarence M. Weed..... Dr. Albert E. Grant..... Charles S. Langley.....	
East Kingston.....	<i>George H. Whitchee, Supt.</i> Laura O. Philbrick..... Joseph F. Kimball.....	
	Joseph F. Currier.....	

TOWN.	NAME.	Post-office address when different from town.
Easton.....	Francella Cooley..... Fred H. Bowles..... Will E. Kay.....	
Eaton.....	Eugene W. Hatch..... George E. Doe..... Willie J. Long.....	Wildwood. Snowville. Eaton Center. Snowville.
Efingham.....	Josiah W. Thurston..... Chester H. Drake..... James M. Leavitt.....	Efingham Falls. Center Efingham.
Ellsworth.....	George B. Abbott..... Warren P. Buzzell..... Mrs. Ida J. Avery.....	
Enfield.....	W. F. Hawley..... Carrie E. Currier..... V. M. Clough.....	Locke Haven. Enfield Center. West Canaan.
Enfield (Special).....	Miss Emma Cummings..... Rev. T. Roscoe..... W. A. Wilmot.....	
Epping.....	Daniel W. Ladd..... John J. Tilton..... Edwin S. Folsom.....	
Epsom.....	<i>Edgar E. Hulse, Supt.</i> Mary Josie Rand..... Rev. James M. Blue.....	West Epping. Salem. Short Falls. Short Falls.
Errol.....	Frank L. Seavey..... Alba C. Thurston..... Mary E. Davis.....	
Exeter.....	Allen Illsley..... John A. Brown..... George Wentworth.....	
Farmington.....	Clarence Getchell..... George A. Davis..... Charles H. Tripp, Jr.....	
Farmington (Special)	William V. Ware..... Dr. Albert Garland..... Mrs. Nina V. Greeley.....	Rochester, Route No. 2. Rochester, Route No. 3.
Fitzwilliam.....	Arthur H. Wiggin..... John M. Parker..... Dr. George S. Emerson.....	
Francestown.....	Mrs. Lillian Howes..... <i>Henry B. Stearns, Supt.</i> John W. Carson.....	
Franconia.....	George K. Wood..... Maria Richardson..... Henry H. Clark.....	Marlborough. New Boston. New Boston.
Franklin.....	Charlie E. Whipple..... Frank P. Whitney..... Omar A. Towne.....	
Freedom.....	Miss Mary A. Proctor..... Rev. L. W. Phillips..... <i>Henry C. Sanborn, Supt.</i>	Franklin Falls. Franklin Falls. Franklin Falls.
Fremont.....	Aldo E. Lovering..... Charles H. Andrews..... Arthur P. Merrow.....	
Gilford.....	Andrew J. Brown..... James B. Martin..... Eugene D. Sanborn.....	Epping.
Gilmanton.....	Freeman G. Smith..... Daniel H. Rowe..... Mrs. Julia A. Gove.....	Laconia. Laconia, Route No. 4. Lakeport.
Gilsum.....	Laura E. Varney..... C. Frank Paige..... Frank N. Merrill.....	
	Mrs. M. A. Hammond..... Francis C. Minor..... Lucy M. Loveland.....	Gilmanton Iron Works.

TOWN.	NAME.	Post-office address when different from town.
Goffstown	George Pattee.....	Manchester. Grasmere.
	L. T. Barnard	
	Henry M. Beard	
Goffstown (Special)..	Henry H. Stark.....	
	Samuel Upton	
	W. S. Rowell	
	Peter Jones	
	Mrs. Charles S. Parker.....	
	Miss Annie Kendall	
Gorham	Dr. Henry Marble.....	
	James T. Culhane	
	Mrs. W. C. Libbey	
Goshen	William T. Thissell.....	Mill Village.
	George F. Crane	Mill Village.
	Emma A. Sholes	
Grafton	Weston C. Rollins	Grafton Center.
	Emma M. Martin.....	Grafton Center.
	Angie Straw	
Grantham	Clara B. Howe	
	Henry W. Hurd	
	Etta M. Horton	
Greenfield.....	Frank H. Wheeler.....	
	Mason L. White	
	George S. Peavey	
Greenland.....	Rev. Edward Robie.....	
	John P. Weeks	
	Alvah E. Draper	
Greenville.....	Herbert J. Taft	
	Charles A. Preston	
	Lillie Bacon	
Groton.....	Charles D. Jewell.....	North Groton.
	Josiah Wheel	
	Willard H. Hunkins.....	
Hampstead.....	Dr. George R. Bennette	East Hampstead. Salem.
	Forrest E. Merrill	
	W. A. Chase	
	<i>Edgar E. Hulse, Supt.</i>	
Hampton	Charles M. Batchelder	
	Rev. J. A. Ross	
	A. L. Joplin	Exeter, Box 323.
Hampton Falls.....	Charles J. Merrill.....	
	Henry E. Tilton.....	
	David Batchelder.....	Elmwood. Bennington. Peterborough.
Hancock.....	Henry F. Robinson	
	Charles H. Dutton	
	John B. Adams	Etna.
Hanover	Daniel O. Hoyt	
	Don S. Bridgman	
	Mrs. Adna McPherson.....	Hanover Center.
Hanover (Special)....	Newton A. Frost	
	H. H. H. Langhill.....	
	J. V. Hazen	
	Mrs. Elizabeth Worthen.....	
	David C. Wells	
	Charles D. Adams	Chesham.
Harrisville	Samuel D. Bemis	
	James Pierce	
	Abner E. Drury	North Haverhill.
Haverhill.....	Mariam Browne	
	W. O. Burbeck	
	W. F. True	East Haverhill.
Haverhill (Woods- ville District).....	E. E. Craig	
	S. M. Chamberlin.....	
	J. F. Leonard	
	M. H. Annis	
	J. M. Howe	
	F. E. Boothe	

TOWN.	NAME.	Post-office address when different from town.
Hebron	Ellen E. Rogers..... Fred M. Jesseman..... Viola Clement.....	
Henniker.....	George H. Dodge..... Dr. George H. Sanborn..... Rev. T. C. H. Bouton.....	
Hill	Joseph W. Favor..... Angelo H. Fowler..... Alfred A. Bartlett.....	
Hillsborough.....	James M. Ray..... Orrin S. Huntley..... Mrs. Lizzie S. Tuttle.....	Hillsborough Center. Hillsboro' Upper Village. Hillsborough Bridge.
Hillsborough Bridge (Special).....	Joseph W. Chadwick..... Mrs. James H. Brown..... Stillman H. Baker.....	
Hinsdale.....	Edalbert J. Temple..... Dr. Bertelle F. Worthing..... Walter E. Fay.....	
Holderness.....	John H. Perkins..... Annie F. White..... Winnie Willoughby.....	Plymouth.
Hollis.....	Henry A. Goodwin..... James E. Hills..... Bertha M. Hayden.....	
Hooksett.....	Albert F. Davis..... John Gault..... Eugene S. Head.....	Manchester.
Hopkinton.....	Samuel T. Symonds..... Leowen H. Kelley..... Mrs. Delia A. Bohanan.....	Hopkinton, Route No. 15. Concord, Route No. 1. Contoocook, Route No. 1.
Hudson.....	Dr. H. O. Smith..... Clarence E. Walsh..... Joseph H. LeGallee.....	Hudson Center. Hudson Center.
Jackson.....	Daniel E. Perkins..... James H. Hodge..... George H. Davis.....	Lower Bartlett.
Jackson (Special).....	Julia M. Gray..... Charles S. Meserve..... John B. Hurlin.....	
Jaffrey.....	John Lamb..... Eloise M. Pierce..... F. G. Humiston.....	East Jaffrey. East Jaffrey. East Jaffrey.
Jefferson.....	George C. Evans..... John A. Rogers..... A. C. Martin.....	Starr King. Meadows. Jefferson Highlands.
Kingston	Edna N. Collins..... Simeon P. Clark..... Mrs. Flora E. Hilliard.....	South Kingston.
Keene.....	Edward A. Kingsbury..... Charles P. Pitcher..... Calvin W. Farwell.....	Exeter.
Keene (Special)	Bertram Ellis..... Charles C. Buffum..... Simon G. Griffin..... William C. Hall..... Gardner C. Hill..... Frank H. Whitcomb..... Wilton H. Spalter..... Adolph W. Pressler..... T. W. Harris, Supt.....	
Kensington.....	Stephen Brown, Jr..... Blanche Kimball..... Charles E. Tuck.....	Exeter, Box 194.
Laconia.....	William A. Plummer..... Albert C. Moore..... Mary Gale Hibbard..... Dennis O'Shea..... Clinton S. Abbott.....	

TOWN.	NAME.	Post-office address when different from town.
Laconia.—Continued.	Charles L. Pulsifer.....	Lakeport.
	John G. Quimby.....	Lakeport.
	Olin S. Davis.....	Lakeport.
	Leroy J. Severence.....	Lakeport.
Lancaster.....	<i>Joseph H. Blaisdell, Supt.</i> ...	
	James E. McIntire.....	Route No. 1.
	Miss Jennie McGary.....	Route No. 1.
Lancaster (Special)...	Mrs. W. S. Hartford.....	
	Mrs. Richard Chesman.....	
Landaff.....	Charles A. Howe.....	
	Fred C. Cleveland.....	
	B. J. Carleton.....	Lisbon.
Langdon.....	Willis Holmes.....	
	Charles S. Chandler.....	
Lebanon.....	Marshall F. Bragg.....	Alstead.
	James W. Bascom.....	Alstead.
Lebanon (West Leba- non).....	David H. Foster.....	
	Fred P. Hatch.....	
	A. A. Harbutt.....	
Lebanon (High Sch'l)	George A. Wilkins.....	White River Junction, Vt.
	William H. Tucker.....	
Lee.....	Frank Collins.....	
	Dr. F. O. Smith.....	
	William H. Colton.....	
	Charles A. Dole.....	
Lempster.....	Alfred C. Durgin.....	Lee Hill.
	Maurice N. Lane.....	Dover, Route No. 5.
	Ben F. Davis.....	South Lee.
Lincoln.....	Arthur W. Welch.....	East Lempster.
	Mrs. Jennie L. Olmstead.....	
	Herbert D. Nichols.....	East Lempster.
Lisbon.....	Mrs. G. E. Henry.....	
	Mrs. Seth R. Elliott.....	Flume House.
Lisbon (Sugar Hill) ..	R. Machell.....	
	Clark Edwards.....	Sugar Hill.
	M. Chancey Spooner.....	
Lisbon (Special).....	Isaac Richardson.....	No. Lisbon.
	Mrs. Lizzie M. Bowles.....	Sugar Hill.
	Mrs. Mary Wells.....	Sugar Hill.
Litchfield.....	Mrs. Mary Jefferson.....	Sugar Hill.
	Carlos M. Cogswell.....	
	N. G. English.....	
	F. E. Thorpe.....	
	E. O. Crossman.....	
	Frank Howe.....	
	Willis M. Parker.....	
	Charles L. Wallace.....	
Littleton.....	L. L. Harris.....	Hudson, Route No. 1.
	Charles W. Barnes.....	Hudson, Route No. 1.
	Willie Shepherd.....	Hudson, Route No. 1.
Littleton (Special)...	O. J. Mooney.....	
	F. I. Parker.....	
	William Bronson.....	Pattenville.
Londonderry.....	James W. Remick.....	
	George H. Tilton.....	
	Rev. F. G. Chutter.....	
	M. F. Young.....	
	C. F. Nutting.....	
	G. W. McGregor.....	
	F. H. English.....	
	C. F. Eastman.....	
Loudon.....	C. F. Davis.....	
	Daniel G. Annis.....	North Londonderry.
	Miss Mabel F. M. Nevins...	West Derry.
Loudon.....	Mrs. Sarah Annis.....	North Londonderry.
	Albert E. Colcord.....	
Loudon.....	Samuel N. Cate.....	
	Dr. W. A. Megrath.....	

TOWN.	NAME.	Post-office address when different from town.
Lyman	S. W. Miner	
	William S. Bennett.....	
	M. Ward Clough.....	
Lyme.....	Frank A. Chesley.....	Lyme Center.
	Bertram E. Willey.....	
	Payson E. Fairfield.....	
Lyndeborough	Mrs. Elsie Sargent.....	South Lyndeborough.
	Sumner G. Hartshorn.....	South Lyndeborough.
	Algernon W. Putnam.....	South Lyndeborough.
Madbury	Charles S. Kingman.....	
	Charles W. Hayes.....	Dover.
	Henry L. Felker.....	Dover.
Madison	Josiah H. Hobbs.....	
	Samuel J. Gilman.....	Silver Lake.
	John H. Pearson.....	
Manchester	Dr. George D. Towne.....	
	Eliot C. Lambert.....	
	Walter B. Heath.....	
	Charles H. Manning.....	
	Will C. Heath.....	
	Louis E. Phelps.....	
	Nathaniel L. Colby.....	
	G. Fred Soule.....	
	John T. Kelley.....	
	Daniel J. McAuliffe.....	
	Eugene B. Dunbar.....	
	Harry L. Davis.....	
	Edward B. Woodbury.....	
	Edson S. Heath.....	
	Walter B. Mitchell.....	
	Benjamin Price.....	
	Henry I. Lemay.....	
	Sabin Nourry.....	
	<i>Charles W. Bickford, Supt.</i>	
Marlborough.....	Levi A. Fuller.....	
	Rev. Allen J. Smith.....	
	Warren H. Clarke.....	Marlborough Depot.
	<i>Henry B. Stearns, Supt.</i>	
Marlow.....	E. A. Jones.....	
	Mrs. Ellen Huntley.....	
	George F. Gee.....	
Mason.....	Albert O. Childs.....	
	Albert B. Eaton.....	Greenville.
	John K. Smith.....	Townsend, Mass.
Meredith	Mortimer R. Buzzell.....	Lakeport, Route No. 2.
	Mrs. Isabel A. Gilman.....	
Meredith (Special)...	Leroy N. Sinclair.....	Meredith Center.
	Edmund Quimby.....	
	Levi Burnell.....	
	Dr. F. L. Hawkins.....	
	E. Carleton Mansfield.....	
	Mrs. D. E. Eaton.....	
	Bertram Blaisdell.....	
Merrimack	Harry M. Green.....	Thornton's Ferry.
	Joseph H. Foster.....	Reed's Ferry.
	Agnes L. McIntire.....	Reed's Ferry.
Middleton	Frederick A. Orne.....	
	Warren H. Whitehouse.....	
	James D. Moore.....	Union.
Milan.....	Arthur V. Hebbard.....	
	Frank W. McLoughlin.....	West Milan.
	A. E. Wheeler.....	
Milford	Fred W. Farnsworth.....	
	Mrs. Clara E. Patch.....	
	C. A. Langdell.....	

TOWN.	NAME.	Post-office address when different from town.
Milton	Annie E. Cook..... Frank Horne..... Forrest L. Marsh.....	Milton Mills.
Monroe	Maria L. Emery..... Robert S. Ward..... Ida M. Carter.....	North Monroe. North Monroe.
Mont Vernon.....	Frank O. Lamson..... Mrs. C. H. Trow..... Mrs. Annie E. Perham.....	
Moultonborough.....	James E. French..... Lewis A. Sibley..... Rev. John E. Sweet.....	Centre Harbor.
Nashua.....	E. E. Parker..... J. H. Vickery..... Lester F. Thurber..... James H. Tolles..... Dr. Bradford Allen..... Dr. T. A. McCarthy..... J. H. Field..... W. C. Harriman..... Dr. C. B. Hammond..... W. J. Flather..... W. H. Beason..... <i>James H. Fassett, Supt.</i>	
Nelson	George S. Page..... Sarah Tolman..... Homer F. Priest.....	Munsonville.
New Boston.....	Charles S. Colburn..... Henry Kelso..... Frank A. Greer.....	
Newbury	Clarence L. Perkins..... John H. Gillingham..... Nathan S. Johnson.....	Bradford. South Newbury. Mt. Sunapee.
Newcastle	James W. Pridham..... Conrad Push..... Andrew B. White.....	
New Durham.....	John B. Chamberlin..... Shem C. Wentworth..... Mary J. Young.....	Farmington. Farmington.
Newfields.....	Mary C. Fitts..... Charles E. Smith..... George L. Chase.....	
New Hampton.....	Kendrick W. Smith..... Mrs. Nellie H. Dow..... Mrs. Flora B. Dearborn.....	Ashland. Ashland.
New London.....	W. M. Knowlton..... Mrs. Charles W. Gordon..... Mrs. Charles A. Lamson.....	Elkins.
Newington.....	Corrine H. Coleman..... Mary S. Pickering..... Daniel W. Badger.....	Portsmouth. Portsmouth. Smithville.
New Ipswich.....	Charles Wheeler..... William R. Thompson..... Anna A. Goldsmith.....	Bank Village. Bank Village.
Newmarket.....	George O. Hodgedon..... Alanson C. Haines..... Dr. Edward F. Bibber..... <i>George H. Whitcher, Supt.</i>	
Newport	Rotheus E. Bartlett..... William F. Richards..... George E. Lewis.....	Durham. North Newport.
Newton.....	Mrs. Kittie A. J. Nichols..... George H. Battles..... Elvira R. Dart.....	Newton Junction.
Northfield	Charles L. Barnard..... Olin T. Lovejoy..... Gawn E. Gorrell.....	Tilton, Route No. 2. Tilton, Route No. 2. Tilton, Route No. 2.

TOWN.	NAME.	Post-office address when different from town.
North Hampton.....	Rev. T. V. Haines..... Albert E. Locke..... Emmons T. Brown.....	Little Boar's Head. Groveton. Groveton.
Northumberland.....	W. C. Hamilton..... F. G. McKellips..... F. N. Piper.....	
Northwood.....	Mary O. Cate..... Edwin K. Welch..... Edwin F. Towle.....	Northwood Center. Northwood Narrows. West Nottingham.
Nottingham.....	Lewis H. Welch..... Dr. Fred Fernald..... Scott L. Daniels.....	
Orange.....	Everett E. Eastman..... John H. French..... Marcus L. Staples.....	Canaan. Canaan.
Orford.....	Ernest W. Cushman..... Sherman Goodwin..... Charles M. Gale.....	Orfordville. Wentworth. Centerville.
Ossipee.....	Dr. E. W. Hodsdon..... Charles A. Wiggin..... Albra Fogg.....	Moultonville.
Pelham.....	George S. Butler..... Susan M. Smith..... Mrs. Mary C. Berry.....	
Pembroke.....	Almon F. Burbank..... Samuel D. Robinson..... George W. Fowler..... <i>Frank H. Benedict, Supt.</i>	Suncook. Concord, Route No. 14. Suncook. Pittsfield.
Peterborough.....	Mrs. Annie G. Holt..... William Moore..... Edwin H. Taylor.....	
Piermont.....	H. S. Stanley..... Martha B. Reneau..... Frank T. Worthen.....	
Pittsburg.....	William A. Abbott..... Charles Merril..... Mrs. Julia L. Johnson.....	Connecticut Lake.
Pittsfield.....	Frank S. Jenkins..... Dr. Albion H. French..... Erskine Dennison..... <i>Frank H. Benedict, Supt.</i>	
Plainfield.....	Lucy M. Lewin..... Lydia S. Penniman..... Ernest R. Woodbury.....	Meriden. Meriden.
Plaistow.....	Rev. Frank Parker..... Algernon A. Sawyer..... Marshall B. Peaslee.....	Westville.
Plymouth.....	John Keniston..... Alvin F. Wentworth..... Dr. Haven Palmer.....	
Portsmouth.....	John Pender..... Calvin Page..... Charles E. Hodgdon..... J. Edw. Pickering..... George W. McCarthy..... Sherman T. Newton..... Richard I. Walden..... Edward H. Adams..... Rev. Lucius H. Thayer..... Samuel W. Emery..... Fred L. Martin..... Ceylon Spinney..... <i>Henry C. Morrison, Supt.</i>	
Randolph.....	Charles E. Hunt..... Joel E. Leighton..... Mrs. F. C. Wood.....	

TOWN.	NAME.	Post-office address when different from town.
Raymond.	John H. Smith	
	John M. Cram	
	Lewis Morrison	
Richmond	Nellie M. Wheeler	North Richmond.
	Lewis R. Cass	
Rindge	Lucy W. Amidon	West Rindge.
	Daniel J. Smith	
	Charles F. Platts	
Rochester	Mrs. Jane E. Colby	
	William G. Bradley	
	Benjamin H. Mooney	
	Laurence V. McGill	
	Arthur N. Brock	
	Dr. Guy E. Chesley	
	Samuel D. Felker	
	Nahum Yeaton	
	Leslie P. Snow	
	Dr. Ernest Duval	
	John Hanscam	
	J. Frank Springfield	
	Dr. Dudley L. Stokes	
	N. Thurston Kimball	
	<i>Ernest L. Silver, Supt.</i>	
Rollinsford	Ella E. Plumer	Dover, Route No. 2.
	Mary P. Wentworth	Dover, Route No. 2.
	Catherine Doe	Dover, Route No. 2.
Rollinsford (Salmon Falls)	A. A. Murch	
	George W. Nutter	
	William Sandbrook	
	H. E. Hamilton	
	Edwin A. Stevens	
Roxbury	Arthur W. Ware	Marlborough.
	Cassius M. C. Phillips	East Sullivan.
	George W. C. Nye	Chesham.
Rumney	Mrs. Susie C. Atwood	West Rumney.
	A. S. Russell	
	Jennie M. Stevens	
Rye	Wallace S. Goss	
	Charles S. Whidden	West Rye.
	Fred D. Parsons	
Salem	Clinton L. Silver	
	George W. Thom	Salem Depot.
	Seth M. Pattee	North Salem.
	<i>Edgar E. Hulse, Supt.</i>	
Salisbury	Ernest C. Currier	Warner, Route No. 1.
	Leander N. Sawyer	Salisbury Heights.
	Mrs. Louise Simonds	
Sanbornton	Rev. E. H. Wright	Franklin Falls, Route 1.
	Otis S. Sanborn	Laconia, Route No. 1.
	J. W. Sanders	Laconia, Route No. 1.
Sandown	Mrs. Lucy Bingham	Box 29.
	Samuel H. Morse	
	John D. Kelley	
Sandwich	John S. Quinby	Center Sandwich.
	Dr. A. B. Hoag	North Sandwich.
	D. D. Atwood	Center Sandwich.
Seabrook	Jeremiah Chase	
	James Smith	Smithtown.
	George P. Eaton, Jr.	South Seabrook.
Sharon	B. H. Sanders	Peterborough.
	Wallace W. Richardson	Peterborough.
	Daniel M. Green	Peterborough.
Shelburne	Elery Wheeler	
	James B. Evans	
	Wesley W. Wheeler	

TOWN.	NAME.	Post-office address when different from town.
Somersworth.....	Thomas J. Dougherty	
	Elisha C. Andrews.....	
	Goldsberry B. Merritt.....	
	Mark A. Kearns	
	James A. Edgerly.....	
	Charles F. Crockett.....	
	Napoleon Leduc.....	
	Frank E. Libbey.....	
	Samuel A. Seavey.....	
South Hampton.....	Frederick B. French.....	
	Mrs. Grace Evans.....	Amesbury, Mass.
	George B. Palmer.....	
Springfield.....	Florence L. Clark.....	West Springfield.
	Ella McDaniel.....	West Springfield.
	Ruel L. Heath.....	West Springfield.
Stark.....	W. T. Pike.....	
	John H. O'Connor.....	Percy.
	Mrs. L. B. Cole.....	Crystal.
Stewartstown.....	Ella A. Keazer.....	
	Byron B. Stillings.....	
	Isabelle Brown.....	
Stewartstown (West)	S. E. Watts.....	
	Leon D. Ripley.....	
	George W. Allen.....	
Stoddard.....	C. B. McClure.....	Munsonville.
	Mrs. Ella E. Abbott.....	Marlow.
	William A. Hobbs.....	
Strafford.....	Daniel S. Woodman.....	
	M. Corinne Tufts.....	Rochester, Route No. 1.
	Hiram S. Hill.....	Center Strafford.
Stratford.....	Garvin R. Magoon.....	Coos.
	John C. Hutchins.....	Coos.
	W. R. Brown.....	
Stratham.....	George E. Gowen.....	
	Fred L. Jewell.....	
	Otis B. French.....	
	George H. <i>Whitcher, Supt.</i>	Durham.
Sullivan.....	Fannie L. Hubbard.....	East Sullivan.
	Horace R. Fifield.....	East Sullivan.
	Marshall J. Barrett.....	
Sunapee.....	George H. Gould.....	George's Mills.
	J. W. Fulton.....	
	Miss Hattie M. Smith.....	
Surry.....	Edward J. Guillow.....	
	Harrison N. Scripture.....	
	Frank E. Nesmith.....	
Sutton.....	Fred A. Pressy.....	
	Robert L. Smiley.....	North Sutton.
	Mary E. Bailey.....	South Sutton.
Swanzy.....	Dr. George I. Cutler.....	West Swanzy.
	Mrs. Jessie M. Marsh.....	Westport.
	Mrs. Lucie E. Whitcomb.....	
Tamworth.....	Leslie O. Meader.....	
	Alice B. Remick.....	
	Alonzo Nickerson.....	Pequaket.
Temple.....	Arthur F. Rockwood.....	
	Mrs. W. E. Hayward.....	
Thornton.....	Josiah T. Bradley.....	Woodstock.
	Gertrude Kendall.....	West Thornton.
	Joseph Gilman.....	Campton Village.
Tilton.....	Horace Sanborn.....	
	W. H. H. Rollins.....	
	Mrs. Lucy Wyatt.....	
Tilton (Special).....	Obe G. Morrison.....	
	Mrs. C. H. Crockett.....	
	Ford T. Sanborn.....	

TOWN.	NAME.	Post-office address when different from town.
Troy	Henry L. Barnard	
	Franklin Ripley	
	Harry S. Platts	
	<i>Henry B. Stearns, Supt.</i>	Marlborough.
Tuftonborough	J. M. Haley	Center Tuftonborough.
	George W. Copp	Melvin Village.
	Daniel B. Palmer	
Unity	Fred L. Gould	Claremont.
	Granville W. Morgan	East Unity.
	Hattie A. Smith	
Wakefield	Belle H. Wentworth	Union.
	Dr. P. T. Haskell	Sanbornville.
	Horace B. Tuttle	
Walpole	Rev. E. A. Keep	
	C. J. O'Neil	Bellows Falls, Vt.
	Henry E. Putnam	Drewsville.
	William I. King	Bellows Falls, Vt.
	Edward A. Watkins	
	John W. Graves	
	<i>Clinton J. Richards, Supt.</i> ...	
Warner	F. W. Johnson	
	Arthur G. Fish	
	Hannah M. G. Colby	
Warren	Henry L. Cotton	
	Walter P. Smith	
	Mrs. Fred Kelley	
Washington	C. Everett Lord	
	Sarah E. Safford	
	Venetta D. Peasley	East Washington.
Waterville	No School Board	
Weare	Mrs. Josephine F. Flanders..	Clinton Grove.
	Charles H. Peaslee	East Weare.
	Elbridge H. Dearborn	Riverdale.
Webster	Luther C. Putney	
	Rev. Harvey C. Sawyer	
	Charles F. Sanborn	
Wentworth	Charles T. Gove	
	Persis M. Plumer	
	Ben B. Foster	West Rumney.
Wentworth's Loca- tion	Mary S. Flint	
	John W. Brooks	
	Mrs. M. A. Bennett	
Westmoreland	George S. Aldrich	Westmoreland.
	Don H. Scovell	East Westmoreland.
	Frank A. Knight	Parkhill.
	<i>Clinton J. Richards, Supt.</i> ...	Walpole.
Whitefield	Mrs. Fred Williams	
	Andrew B. Elliott	
	Mrs. Van Dodge	
Whitefield (Special) ..	E. W. Snow	
	Rev. John S. Harrington	
	Mrs. A. W. Miner	
Wilmot	Dudley B. Andrews	Wilmot Flat.
	Mrs. Kate F. Wells	West Andover.
	Mrs. Mary Tewksbury	
Wilton	Henry L. Emerson	
	Maria L. Moore	
	George E. Bales	
Winchester	Franklin P. Kellom	
	Hosea W. Brigham	
	Charles J. Fosgate	
Windham	William D. Cochran	Canobie Lake.
	Edward A. Haskell	Canobie Lake.
	William L. Emerson	

TOWN.	NAME.	Post-office address when different from town.
Windsor	Roxanna J. Blanchard	Hillsboro' Upper Village.
	Joseph R. Nelson	Hillsboro' Upper Village.
	George M. Russell	Hillsboro' Upper Village.
Wolfeborough	Edward H. Lord	
	George A. Haines	North Wolfeborough.
	Albert B. Rust	South Wolfeborough.
Woodstock	Daniel B. Baston	North Woodstock.
	Elmer E. Woodbury	
	Mrs. Jennie S. E. Hunt	North Woodstock.

PRINCIPALS OF INSTITUTIONS OF A HIGHER GRADE.

COLLEGES.

Town.	Name.	Principal.
Hanover	Dartmouth College.	Rev. William J. Tucker, <i>Pres.</i>
	Medical College.	Dr. C. P. Frost.
	Thayer School of Engineering.	Prof. Robert Fletcher.
Durham	N. H. College of Agriculture and the Mechanic Arts.	Rev. Charles S. Murkland, <i>Pres.</i>

NORMAL SCHOOL.

Plymouth.....	State Normal School.....	James E. Klock.
---------------	--------------------------	-----------------

PRIVATE SCHOOLS.

Town.	Name of Institution.	Principal.
Andover	Proctor Academy.....	James S. McCann.
Atkinson	Atkinson Academy.....	H. N. Dunham.
Canterbury	Kezer Academy.....	Clara M. Currier.
Concord	St. Mary's School.....	Isabelle M. Parks.
	St. Paul's School.....	Rev. Dr. Joseph H. Coit.
Derry	Pinkerton Academy.....	George W. Bingham.
Exeter	Phillips Academy.....	Harlan P. Amen.
	Robinson Seminary.....	George N. Cross.
Franconia	Dow Academy.....	Leon A. Martin.
Francestown.....	Francestown Academy.....	Franklin L. Adams.
Gilmanton.....	Gilmanton Academy.....	Ralph H. Kent.
Hampton.....	Hampton Academy.....	Everett G. Loring.
Holderness	School for Boys.....	Rev. Lorin Webster.
Kingston	Sanborn Seminary.....	Z. Willis Kemp.
Meriden	Kimball Union Academy.....	Ernest R. Woodbury.
Milton	Nute High School.....	Arthur D. Wiggin.
Mont Vernon.....	McCullom Institute.....	Rev. H. P. Peck.
New Hampton.....	Literary Institute.....	Frank W. Preston.
New Ipswich.....	Appleton Academy.....	John Preston.
New London.....	Colby Academy.....	Rev. Horace G. McKean.
Northwood	Northwood Seminary.....	Loring G. Williams.
Northwood Center.	Coe's Academy.....	Edwin K. Welch.
Pembroke	Pembroke Academy.....	Isaac Walker.
Strafford	Austin Academy.....	A. E. Thomas.
Tilton	N. H. Conference Seminary...	George L. Plimpton.
Washington.....	Tubbs Academy.....	
Wolfeborough.....	Brewster Free Academy.....	Edward H. Lord.

HIGH

TOWNS.	Principal.	Number weeks in school.
Alton	Isaac Copp.....	27
Antrim	Charles S. Paige.....	36
Berlin	Frank B. Wight.....	38
Bethlehem	Samuel A. Burleigh.....	34
Claremont.....	L. S. Dewey.....	37
Concord	Frederick Doring.....	38
Dover.....	William J. Rushmore.....	38
Farmington.....	Charles F. Towne.....	38
Franklin	Leslie L. Cleveland.....	36
Goffstown.....	Walter B. Pierce.....	36
Gorham	Edward P. Williams.....	35
Hanover	W. B. Woodbury.....	36
Haverhill.....	C. H. Martin.....	36
Henniker.....	Louis DeWitt Record.....	35
Hillsborough.....	Rufus B. Barton.....	36
Hinsdale	Daniel L. Fisher.....	37
Jaffrey.....	Dwight G. Burrage.....	35
Keene.....	Robert A. Ray.....	38
Laconia	Ernest W. Butterfield.....	36
Lancaster.....	Willis O. Smith.....	36
Lebanon	Robert Forsyth.....	36
Lisbon.....	Charles L. Wallace.....	36
Littleton	Melville C. Smart.....	38
Manchester.....	George H. Libbey.....	37
Milford.....	Robert J. Sisk.....	38
Nashua.....	Lemuel S. Hastings.....	36
Newmarket.....	A. B. Crawford.....	36
Newport.....	Frederick D. Haywood.....	36
Peterborough.....	Frank E. Mason.....	36
Pittsfield.....	Norman J. Page.....	36
Plymouth.....	Newton D. Clark.....	37
Portsmouth.....	Allen H. Knapp.....	38
Rochester.....	Frederick G. Getchell.....	38
Somersworth.....	Chancey C. Ferguson.....	38
Walpole.....	Franklin E. Heald.....	34
Warner.....	Fred S. Libbey.....	39
Whitefield.....	Harry L. Moore.....	36
Wilton.....	Henry H. Pratt.....	36
Winchester.....	Vryling W. Buffum.....	36
Woodsville.....	S. W. Robertson.....	36

SCHOOLS.

Number years in course.	Number of men teachers.	Principal's annual salary.	Number of women teachers.	Annual average salary.	Number of pupils.	Value of building, apparatus, and grounds.
4	1	\$550.00	.....	.....	15	
4	1	850.00	1	\$216.00	56	\$10,000.00
4	1	1,200.00	2	525.00	58	14,000.00
4	1	834.00	.....	.....	.....
4	1	1,500.00	6	500.00	84	30,000.00
4	1	2,500.00	8	716.00	260	125,000.00
4	2	1,700.00	4	500.00	163	20,000.00
4	1	800.00	2	450.00	44	15,000.00
4	1	1,400.00	3	499.66	78	50,000.00
4	1	800.00	1	324.00	40	12,200.00
4	1	800.00	1	350.00	39	12,000.00
4	2	800.00	1	400.00	40	27,000.00
4	1	600.00	1	216.00	19	1,000.00
4	1	700.00	2	340.00	72	8,700.00
4	1	900.00	1	378.00	35	26,000.00
4	2	1,150.00	1	550.00	54	13,000.00
4	1	650.00	1	175.00	28	
4	3	1,700.00	4	550.00	183	50,000.00
4	2	1,200.00	3	566.70	115	30,000.00
4	1	1,200.00	2	520.00	55	7,000.00
4	1	1,200.00	4	371.00	70	20,000.00
4	1	1,500.00	2	450.00	66	30,000.00
4	1	1,500.00	2	600.00	84	55,000.00
4	5	2,200.00	11	713.66	428	200,000.00
4	1	1,200.00	3	466.66	94	50,000.00
4	1	2,000.00	7	713.33	244	109,585.00
4	1	1,000.00	1	500.00	49	
4	2	900.00	3	390.00	84	
4	1	1,000.00	2	500.00	51	5,500.00
4	1	850.00	2	427.00	86	
4	3	1,200.00	3	400.00	89	
4	3	1,600.00	6	687.50	267	20,000.00
4	2	1,100.00	3	583.33	132	50,000.00
4	1	1,400.00	3	550.00	71	25,000.00
4	1	600.00	1	170.00	40	5,000.00
4	1	900.00	1	400.00	53	
4	1	800.00	1	432.00	32	7,500.00
4	1	800.00	2	360.00	42	
4	.....	900.00	2	396.00	27	
4	1	1,200.00	1	432.00	41	

STATISTICAL TABLES.
1901.

TABLE No. I.—BELKNAP COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any year.	Least number.	Average number of weeks.
Alton	1	10	3	5	.....	37	25	27.70
Barnstead	1	12	.....	4	.....	27	20	26.41
Belmont	1	9	4	3	.....	29	29	29.00
Center Harbor	1	5	2	3	.....	31	29	29.60
Gilford	1	9	.....	6	1	30	19	21.12
Gilmanton	1	13	.....	4	2	22	22	22.00
Laconia	1	28	26	.....	.....	36	36	36.00
Meredith	12	13	3	5	2	33	10	24.46
New Hampton	1	11	.....	4	1	24	23	23.30
Sanbornton	1	11	.....	1	2	26	9	24.45
Tilton	2	10	6	.....	.....	36	32	34.40
Total	13	130	44	35	8	.....	.....	27.13

TABLE No. II.—BELKNAP COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Alton	11	.....	.....	13	\$8,000.00	\$300.00
Barnstead	13	.....	.....	13	5,600.00	150.00
Belmont	7	.....	.....	10	9,000.00	175.00
Center Harbor	4	.....	.....	5	2,175.00	50.00
Gilford	11	1	.....	11	4,000.00	100.00
Gilmanton	18	3	.....	18	4,500.00	300.00
Laconia	10	.....	.....	33	80,000.00	2,000.00
Meredith	12	.....	1	15	12,000.00	200.00
New Hampton	12	1	.....	12	5,350.00	164.00
Sanbornton	14	.....	.....	14	6,700.00	300.00
Tilton	5	.....	1	12	30,500.00	325.00
Total	117	5	2	156	\$167,825.00	\$4,064.00

TABLE No. III.—BELKNAP COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.								
Alton.....	123	102	123	121	26	204	14	182	160	88	....	1
Barnstead.....	81	77	104	91	17	162	16	154	142	92	....	...
Belmont.....	113	110	128	123	20	225	6	190	171	89	....	3
Center Harbor.	38	30	45	36	11	70	....	72	60	83	....	...
Gilford.....	48	49	51	50	7	88	6	100	96	84	....	...
Gilmanton.....	114	107	120	109	12	209	8	229	205	89	....	...
Laconia.....	675	688	734	741	101	1,282	92	1,119	1,061	94	....	...
Meredith.....	114	82	172	134	17	270	19	266	215	82	....	...
New Hampton.	74	63	82	76	19	137	2	118	96	89	....	...
Sanbornton....	81	66	99	86	17	162	6	129	118	91	....	...
Tilton.....	192	208	192	208	32	61	7	323	311	96	....	...
Total.....	1,653	1,582	1,850	1,775	279	3,170	176	2,882	2,635	88	....	4

TABLE No. IV.—BELKNAP COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Alton	2	\$26.00	10	\$27.20	6	3	4	.....	.....
Barnstead	2	24.00	16	24.62	1	4	.....	.....	1
Belmont .....	.....	.....	14	30.67	1	2	1	.....	.....
Center Harbor .....	.....	.....	5	22.00	3	2	.....	.....	.....
Gilford .....	.....	.....	9	24.44	2	9	.....	.....	.....
Gilmanston	1	20.00	20	21.58	2	7	5	.....	.....
Laconia .....	.....	.....	29	41.56	1	.....	12	4	5
Meredith .....	.....	.....	13	30.00	3	7	4	2	1
New Hampton	1	21.50	16	22.13	5	9	.....	.....	.....
Sanbornton	1	24.00	14	23.08	1	6	2	.....	.....
Tilton	1	77.76	9	36.44	.....	4	3	.....	.....
Total	8	\$32.21	155	\$27.61	25	53	31	6	7

TABLE No. V.—BELKNAP COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	Appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Alton	\$1,340.00	\$800.00	\$306.50	\$125.50	.....	\$200.00	\$137.10	\$100.00	\$3,009.10
Barnstead	1,130.00	500.00	150.00	109.50	\$138.19	.....	67.20	14.75	2,109.64
Belmont	1,210.00	1,250.00	.....	125.00	.....	.....	92.00	.....	2,677.00
Center Harbor..	600.00	100.00	.....	37.50	.....	.....	57.60	12.90	808.00
Gilford	855.00	100.00	.....	61.00	33.60	.....	51.50	.....	1,101.10
Gilmanton	1,160.00	500.00	150.00	110.50	.....	.....	43.10	20.00	1,983.60
Laconia	10,660.00	10,876.50	.....	724.50	.....	.....	739.00	75.00	23,075.00
Meredith	1,715.00	1,475.00	.....	138.50	.....	.....	.....	728.88	4,057.38
New Hampton..	760.00	200.00	.....	77.50	.....	.....	112.00	344.98	1,494.48
Sanbornton	1,050.00	300.00	93.68	82.00	77.71	.....	109.30	19.00	1,731.69
Tilton	2,825.00	1,456.00	325.00	204.00	94.99	.....	93.47	112.20	5,110.66
Total.....	\$23,305.00	\$17,557.50	\$1,025.18	\$1,795.50	\$344.49	\$200.00	\$1,502.27	\$1,427.71	\$47,157.65

TABLE No. VI.—BELKNAP COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Alton	\$200.00	\$106.50	\$306.50	\$2,227.50	\$199.99	\$100.00	.....	\$254.64	\$3,088.63
Barnstead	84.56	57.39	141.95	1,842.00	.....	125.00	\$15.00	193.38	2,317.33
Belmont	55.73	36.37	92.10	2,074.50	.....	100.62	16.65	307.91	2,591.78
Center Harbor..	15.80	6.04	21.84	665.00	.....	35.00	.....	116.00	837.84
Gilford .....	.....	89.67	89.67	1,010.00	.....	60.00	10.00	60.44	1,230.11
Gilmanton	20.00	140.00	160.00	1,268.00	.....	100.00	.....	108.79	1,636.79
Laconia	730.81	650.00	1,380.81	15,187.29	1,200.00	90.00	.....	5,216.90	23,075.00
Meredith	238.64	145.89	384.53	3,143.10	.....	215.00	.....	179.79	3,922.42
New Hampton..	66.35	48.98	115.33	1,400.06	.....	73.00	10.00	47.61	1,646.00
Sanbornton.....	62.45	31.23	93.68	1,534.00	.....	125.00	.....	92.53	1,845.21
Tilton	439.60	87.30	526.90	3,688.09	.....	80.00	15.00	336.03	4,646.02
Total	\$1,913.94	\$1,399.37	\$3,313.31	\$34,039.54	\$1,399.99	\$1,103.62	\$66.65	\$6,914.02	\$46,837.13

TABLE No. VI.—*Continued.*—BELKNAP COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total Expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Alton.....				\$3,088.63	\$3,088.63	.0049	\$17.48	\$1.67
Barnstead.....			\$97.14	2,317.33	2,414.47	.0052	15.67	.92
Belmont.....			187.00	2,591.78	2,778.78	.0048	14.62	.48
Center Harbor..				837.84	837.84	.0028	11.54	.30
Gilford.....				1,230.11	1,230.11	.0031	14.35	1.10
Gilmanton.....			213.84	1,636.79	1,850.63	.0038	8.16	.70
Laconia.....				23,075.00	23,075.00	.0051	20.60	1.23
Meredith.....	\$497.42			3,922.42	4,419.84	.0061	19.17	1.87
New Hampton..			73.51	1,646.00	1,719.51	.0057	14.50	.97
Sanbornton.....			54.09	1,845.21	1,899.30	.0040	14.85	.78
Tilton.....	24,000.00	\$1,680	38.75	4,646.02	30,364.77	.0070	19.41	1.62
Total.....	\$24,497.42	\$1,680	\$664.33	\$46,837.13	\$73,678.88	.0047	\$17.06	\$1.14

TABLE No. I.—CARROLL COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any year.	Least number.	Average number of weeks.
Albany.....	1	4	.....	2	1	24	21	22.25
Bartlett.....	2	9	3	2	.....	35	30	31.66
Brookfield.....	1	3	.....	1	.....	24	22	23.33
Chatham.....	1	4	.....	2	.....	28	27	27.25
Conway.....	1	13	4	2	.....	32	21	29.22
Eaton.....	1	5	.....	2	.....	20	20	20.00
Effingham.....	1	7	.....	3	.....	29	10	24.14
Freedom.....	1	6	2	.....	1	25	18	23.00
Hart's Location*	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	2	7	.....	4	1	30	30	30.00
Madison.....	1	6	.....	2	1	27	19	24.33
Moultonborough.....	1	8	.....	.....	.....	34	27	28.00
Ossipee.....	1	12	.....	5	1	31	21	28.58
Sandwich.....	1	9	.....	6	.....	24	24	24.00
Tamworth.....	1	10	.....	2	.....	26	22	24.00
Tuftonborough.....	1	5	.....	1	.....	28	28	28.00
Wakefield.....	1	12	5	2	.....	34	27	30.83
Wolfeborough.....	1	15	8	3	.....	33	33	33.00
Total.....	19	140	22	39	5	.....	.....	26.61

* No report received.

TABLE No. II.—CARROLL COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Albany.....	4	.....	.....	4	\$1,450	\$250
Bartlett.....	7	.....	.....	10	12,200	900
Brookfield.....	3	.....	.....	3	1,600	75
Chatham.....	5	.....	.....	5	1,000	50
Conway.....	19	.....	.....	22	20,000	300
Eaton.....	7	.....	.....	7	1,000	100
Effingham.....	7	.....	.....	7	3,900	200
Freedom.....	5	.....	.....	6	3,100	100
Hart's Location*.....	.....	.....	.....	.....	.....	.....
Jackson.....	6	.....	.....	7	3,000	50
Madison.....	6	.....	.....	6	1,800	450
Moultonborough.....	10	.....	.....	10	3,500	60
Ossipee.....	12	.....	.....	12	9,050	350
Sandwich.....	9	.....	.....	10	3,500	75
Tamworth.....	11	.....	.....	12	4,500	75
Tuftonborough.....	5	.....	.....	5	6,000	300
Wakefield.....	12	.....	.....	15	3,500	250
Wolfeborough.....	11	.....	.....	15	13,700	350
Total.....	139	.....	.....	156	\$92,800	\$3,935

* No report received.

TABLE No. III.—CARROLL COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.								
Albany.....	29	18	29	19	....	47	1	48	41	85	..	5
Bartlett.....	139	138	123	132	25	222	8	213	183	87	..	4
Brookfield.....	35	31	33	30	5	50	8	59	55	93	..	..
Chatham.....	18	35	25	37	9	43	10	57	47	82	..	..
Conway.....	274	272	307	299	81	497	28	455	399	84	1	3
Eaton.....	39	37	40	39	13	63	3	63	56	87	..	..
Effingham.....	73	45	70	44	11	98	5	95	83	87	..	1
Freedom.....	41	50	45	60	8	93	4	90	78	86	..	..
Hart's Location*..	..	..	..	..	..	..	..	..	..	..	..	..
Jackson.....	39	61	43	67	2	105	3	90	82	91	..	..
Madison.....	47	57	47	57	5	96	3	96	78	86	..	..
Moultonborough..	80	92	82	88	5	154	11	154	143	93	..	4
Ossipee.....	146	121	158	138	26	264	6	255	222	87	..	..
Sandwich.....	60	100	80	87	14	143	10	150	130	86	..	6
Tamworth.....	92	91	91	92	18	159	6	180	141	78	..	..
Tuftonborough..	59	52	55	48	11	86	6	88	74	84	..	..
Wakefield.....	172	162	162	149	47	242	22	278	227	82	..	..
Wolfeborough....	177	201	176	186	32	329	1	282	251	89	..	..
Total.....	1,520	1,563	1,566	1,572	312	2,691	135	2,653	2,290	86	1	23

* No report received.

TABLE No. IV.—CARROLL COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Albany.....			4	\$25.00	1				
Bartlett.....	1	\$55.00	8	27.67			3	2	
Brookfield.....			5	26.33					
Chatham.....	1	26.00	9	23.33	1	6			1
Conway.....	2	44.00	23	31.00	2	5	3	11	4
Eaton.....	1	24.00	6	23.00		2			
Effingham.....			7	27.42	1		1		
Freedom.....			6	24.00			1		
Hart's Location*.....									
Jackson.....	3	33.00	9	29.00	1	5	1		
Madison.....	1	32.00	5	22.40	2	5			1
Moultonborough.....			10	26.00		5			
Ossipee.....	8	32.66	12	27.00	3	18		1	1
Sandwich.....	1	23.00	12	23.00	2	5	1	2	1
Tamworth.....			10	25.20		7			
Tuftonborough.....			6	27.20		5			
Wakefield.....	4	41.33	14	33.36	1	4	2	4	1
Wolfeborough.....	1	28.00	14	33.18	3	3	3	1	1
Total.....	23	\$33.89	160	\$26.41	17	70	15	21	10

* No report received.

TABLE No. V.—CARROLL COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Albany.....	\$120.00	\$400.00	\$25.00	\$19.00	.....	\$77.21	\$30.00	.....	\$671.21
Bartlett.....	795.00	1,100.00	.....	140.00	.....	381.75	14.00	\$73.50	2,504.25
Brookfield.....	265.00	100.00	63.51	34.50	.....	115.35	35.50	.....	613.86
Chatham.....	140.00	500.00	20.00	33.00	.....	164.37	23.00	3.00	883.37
Conway.....	1,810.00	2,575.00	235.57	294.50	\$9.40	936.53	192.45	.....	6,053.45
Eaton.....	215.00	40.00	60.00	44.00	.....	215.39	40.40	145.65	760.44
Effingham.....	400.00	300.00	.....	55.00	15.00	229.36	70.00	.....	1,069.36
Freedom.....	510.00	300.00	85.00	53.50	.....	.....	56.00	.....	1,004.50
Hart's Locat'n*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	515.00	400.00	.....	57.50	17.00	152.97	51.40	.....	1,193.87
Madison.....	350.00	500.00	.....	61.50	.....	296.04	63.00	.....	1,270.54
Moultonboro'..	690.00	510.00	.....	74.00	.....	229.79	115.00	.....	1,618.79
Ossipee.....	1,115.00	1,000.00	250.00	148.00	.....	384.36	138.65	43.94	3,079.95
Sandwich.....	915.00	316.00	100.00	93.50	133.92	.....	150.20	.....	1,708.62
Tamworth.....	800.00	400.00	150.00	94.50	72.00	334.80	163.04	41.58	2,055.92
Tuftonboro'gh	500.00	200.00	.....	56.50	.....	111.10	90.30	300.00	1,257.90
Wakefield.....	1,670.00	1,000.00	234.00	177.00	104.75	.....	126.00	52.50	3,364.62
Wolfeborough..	2,470.00	875.00	350.37	176.00	258.00	.....	152.00	1,253.00	5,534.00
Total.....	\$13,280.00	\$10,516.00	\$1,573.45	\$1,612.00	\$610.07	\$3,629.02	\$1,510.94	\$1,913.17	\$34,644.65

* No report received.

TABLE No. VI.—CARROLL COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Albany.....	\$25.00	.....	\$25.00	\$562.48	.....	\$25.00	.....	\$27.18	\$639.66
Bartlett.....	120.53	\$43.43	164.02	2,179.00	.....	51.00	\$10.00	251.18	2,655.20
Brookfield.....	56.01	7.50	63.51	464.50	.....	27.00	.....	12.17	567.18
Chatham.....	67.49	5.70	73.19	651.50	.....	22.80	.....	59.00	806.49
Conway.....	198.02	37.55	235.57	4,440.00	.....	200.00	15.00	1,131.00	6,021.57
Eaton.....	74.65	20.57	95.22	550.00	.....	49.75	.....	14.00	708.97
Effingham.....	.....	.....	.....	1,157.00	.....	60.00	.....	77.07	1,294.07
Freedom.....	75.00	10.00	85.00	834.50	.....	45.00	.....	150.00	1,114.50
Hart's Locat'n*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	83.20	5.00	88.20	1,152.00	.....	45.00	2.50	64.25	1,351.95
Madison.....	75.00	25.00	100.00	874.00	.....	45.00	10.50	40.00	1,069.50
Moultonboro'gh	123.44	.....	123.44	1,438.50	.....	90.00	.....	202.67	1,854.61
Ossipee.....	192.39	65.70	258.09	2,324.50	.....	160.00	.....	380.55	3,123.14
Sandwich.....	87.19	14.53	101.72	1,325.00	.....	100.00	5.00	104.43	1,636.15
Tamworth.....	69.79	21.55	91.34	1,533.70	.....	97.50	14.00	124.13	1,860.67
Tuftonborough.	118.87	6.37	125.24	947.00	.....	51.00	.....	51.27	1,174.51
Wakefield.....	190.26	44.11	234.37	2,929.25	.....	125.00	.....	644.30	3,932.92
Wolfeborough..	232.53	166.18	398.71	4,144.95	.....	225.00	25.00	1,099.44	5,893.10
Total.....	\$1,789.37	\$473.25	\$2,262.62	\$27,507.88	.....	\$1,419.05	\$82.00	\$4,432.64	\$35,704.19

* No report received.

TABLE No. VI.—*Continued.*—CARROLL COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Albany.....			\$12.00	\$639.66	\$651.66	.0072	\$13.57	\$.52
Bartlett.....		\$684.65		2,655.20	3,339.85	.0051	15.94	.78
Brookfield.....			100.00	567.18	667.18	.0030	11.30	1.05
Chatham.....			120.68	806.49	927.17	.0011	16.44	1.29
Conway.....	\$1,000.00		381.42	6,021.57	7,402.99	.0070	14.07	.52
Eaton.....			21.05	708.97	730.02	.0061	11.58	1.51
Ettingham.....				1,294.07	1,294.07	.0050	13.62	.....
Freedom.....				1,114.50	1,114.50	.0048	12.38	1.00
Hart's Location*								
Jackson.....				1,351.95	1,351.95	.0040	8.78	.88
Madison.....				1,069.50	1,069.50	.0056	11.14	1.04
Moultonborough				1,854.61	1,854.61	.0054	11.96	.79
Ossipee.....			149.89	3,123.14	3,273.03	.0064	12.83	1.01
Sandwich.....			27.59	1,636.15	1,663.74	.0035	11.09	.67
Tamworth.....				1,860.67	1,860.67	.0049	10.32	.49
Tuftonborough..			241.30	1,174.51	1,415.81	.0043	14.66	1.42
Waketfield.....			173.25	3,932.92	4,106.17	.0065	14.77	.84
Wolfeborough...				5,893.10	5,893.10	.0036	20.85	1.40
Total.....	\$1,000.00	\$684.65	\$1,227.18	\$35,704.19	\$38,616.02	.0049	\$14.17	\$.85

* No report received.

TABLE No. I. — CHESHIRE COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any year.	Least number.	Average number of weeks.
Alstead.....	1	8	2	3	.....	30	8	25.50
Chesterfield.....	1	8	.....	3	1	30	10	25.00
Dublin.....	1	5	.....	3	.....	30	24	28.60
Fitzwilliam.....	1	10	4	2	.....	31	9	25.30
Gilsum.....	1	6	.....	1	1	28	10	26.83
Harrisville.....	1	2	2	.....	.....	31	31	31.00
Hinsdale.....	1	10	7	2	.....	36	34	34.40
Jaffrey.....	1	11	5	1	.....	30	22	26.50
Keene.....	2	31	.....	1	.....	34	25	*28.50
Marlborough.....	1	7	.....	.....	.....	36	35	35.88
Marlow.....	1	5	.....	2	.....	30	18	26.00
Nelson.....	1	2	.....	1	.....	28	28	28.00
Richmond.....	1	5	.....	.....	.....	23	16	20.80
Rindge.....	1	7	1	.....	.....	29	9	23.00
Roxbury.....	1	.....	.....	.....	.....	.....	.....	.....
Stoddard.....	1	3	.....	.....	1	23	19	21.66
Sullivan.....	1	5	.....	3	.....	28	24	25.80
Surry.....	1	3	.....	1	1	31	9	20.33
Swanzy.....	1	11	4	1	.....	32	31	31.63
Troy.....	1	8	8	1	.....	36	25	31.25
Walpole.....	1	16	11	3	.....	35	23	32.74
Westmoreland.....	1	8	.....	3	.....	30	20	27.50
Winchester.....	1	16	.....	4	.....	36	26	28.31
Total.....	24	187	44	35	4	.....	.....	27.48

* Scarlet fever epidemic.

TABLE No. II.—CHESHIRE COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Alstead.....	11	3	..	12	\$4,500	\$400.00
Chesterfield.....	7	..	..	8	6,000	200.00
Dublin.....	5	..	..	5	4,000	50.00
Fitzwilliam.....	8	..	..	10	8,500	.....
Gilsum.....	5	..	..	6	2,000	20.00
Harrisville.....	3	..	..	4	3,000	100.00
Hinsdale.....	6	..	..	13	10,800	1,200.00
Jaffrey.....	13	3	..	17	15,000	350.00
Keene.....	18	1	1	46	140,000	1,500.00
Marlborough.....	4	..	..	8	6,500	200.00
Marlow.....	6	..	..	7	1,800	100.00
Nelson.....	3	..	..	3	4,100	200.00
Richmond.....	5	..	..	5	1,500	200.00
Rindge.....	8	..	..	9	5,000	246.00
Roxbury.....	3	..	..	3	500	150.00
Stoddard.....	3	..	..	3	1,150	75.00
Sullivan.....	5	..	..	5	3,500	70.00
Surry.....	4	..	..	4	1,800	30.00
Swanzy.....	9	..	..	13	10,800	300.00
Troy.....	4	..	..	8	13,000	50.00
Walpole.....	9	2	..	19	25,000	500.00
Westmoreland.....	10	3	..	10	2,500	150.00
Winchester.....	15	2	..	25	17,000	700.00
Total.....	164	14	1	248	\$287,950	\$6,791.00

TABLE No. III. — CHESHIRE COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.		Between six and sixteen.		Over sixteen years.		Average membership.		Average daily attendance.		Per cent. of attendance daily.		In parochial schools.		In other private schools.	
	Boys.	Girls.	Boys.	Girls.																
Alstead.....	82	79	77	79	15	135	6	122	109	89	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chesterfield.....	81	73	84	81	7	149	9	123	108	88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dublin.....	32	22	43	43	8	73	5	55	48	87	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fitzwilliam.....	106	92	124	110	22	205	7	171	170	92	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gilsom.....	43	60	53	71	7	112	5	93	85	91	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harrisville.....	71	91	73	93	16	146	4	111	99	89	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hinsdale.....	133	174	196	225	40	343	38	358	322	90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jaffrey.....	210	180	205	167	11	333	28	280	243	91	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keene.....	756	819	723	792	111	1,245	159	1,284	1,151	89	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marlborough.....	138	149	138	160	29	260	9	238	221	88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marlow.....	48	43	66	57	10	107	6	80	72	90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nelson.....	22	20	24	21	2	39	4	30	25	85	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond.....	57	47	60	48	6	96	6	80	74	90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rindge.....	65	71	75	85	8	148	4	118	101	85	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Roxbury.....	8	3	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stoddard.....	26	29	29	31	9	45	6	42	41	97	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sullivan.....	37	38	41	47	7	78	3	73	69	94	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Surry.....	19	19	26	28	7	47	.....	45	42	93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Swanzy.....	127	156	154	165	15	290	14	248	217	87	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Troy.....	117	140	132	148	.....	278	2	229	193	85	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Walpole.....	323	328	297	288	78	497	10	487	430	88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Westmoreland.....	103	78	105	79	15	164	5	147	135	91	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Winchester.....	217	167	240	185	28	365	32	403	310	77	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	2,831	2,878	2,966	3,003	451	5,156	362	4,867	4,265	82	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* No school in Roxbury. Children attend schools of neighboring towns.

TABLE No. IV. — CHESHIRE COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Alstead.....	1	\$39.00	14	\$26.52	2	3	3	3	1
Chesterfield.....			12	29.00				1	1
Dublin.....			5	35.00		1	1		
Fitzwilliam.....			10	29.73		4	2	2	
Gilsum.....			11	28.00	3	8	1		1
Harrisville.....			5	34.28				2	
Hinsdale.....	2	44.44	8	29.50					3
Jaffrey.....			11	28.00					
Keene.....	1	75.00	37	32.05	5	1		3	7
Marlborough.....			7	33.31	2	1	2	2	1
Marlow.....	2	28.00	7	25.46	3	5			1
Nelson.....			3	28.00	1	1			
Richmond.....			8	27.04	6	1			
Rindge.....			7	29.33	1	2	2	2	1
Roxbury.....									
Stoddard.....			5	30.40	1	1		1	
Sullivan.....			5	27.40	1	1	2		
Surry.....			3	26.00		1			
Swanzy.....	1	52.00	10	31.93		1	1		
Troy.....			7	28.57	2	5			1
Walpole.....	2	45.00	18	33.00			9	6	3
Westmoreland.....	2	29.00	11	24.72	3	8			
Winchester.....			16	28.00	3	2	2	2	2
Total.....	11	\$37.49	220	\$29.37	33	46	25	24	22

TABLE No. V.—CHESHIRE COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Alstead.....	\$1,045	\$255.00	\$100.00	\$76.50	\$179.24	.....	\$167.92	\$6.95	\$1,830.61
Chesterfield.....	1,250	350.00	250.00	87.50	.....	.....	164.00	.....	2,101.50
Dublin.....	1,165	35.00	75.00	41.50	346.36	.....	.....	50.00	1,712.86
Fitzwilliam.....	1,005	870.00	.....	122.00	.....	\$453.68	74.20	.....	2,524.88
Gilsum.....	645	205.00	100.00	68.00	.....	.....	56.40	37.80	1,112.20
Harrisville.....	725	475.00	.....	75.00	13.28	.....	118.00	5.60	1,411.88
Hinsdale.....	2,020	5,464.73	600.00	201.00	.....	.....	147.77	305.55	8,739.05
Jaffrey.....	2,035	770.00	200.00	189.00	.....	.....	135.77	22.19	3,351.96
Keene.....	14,620	9,965.00	2,500.00	793.50	.....	.....	829.30	1,369.02	30,076.82
Marlborough.....	1,500	1,425.00	300.00	141.00	244.66	166.67	158.44	18.00	3,953.77
Marlow.....	730	370.00	46.69	61.50	87.15	.....	54.00	4.80	1,354.14
Nelson.....	285	115.00	.....	20.50	.....	.....	52.65	.....	473.15
Richmond.....	445	525.00	125.00	48.50	.....	.....	.....	2.75	1,146.25
Rindge.....	1,230	395.00	123.56	75.00	.....	.....	100.07	.....	1,923.63
Roxbury.....	165	.....	.....	.....	.....	.....	.....	.....	165.00
Stoddard.....	390	110.00	.....	33.50	.....	.....	96.07	.....	629.57
Sullivan.....	305	295.00	.....	48.50	.....	179.39	51.50	136.80	1,016.19
Surry.....	370	10.43	.....	23.00	.....	.....	68.00	118.72	590.15
Swansey.....	1,715	1,085.00	300.00	172.00	.....	.....	182.82	.....	3,454.82
Troy.....	1,030	1,200.00	250.00	151.00	24.00	546.96	159.20	.....	3,361.16
Walpole.....	3,330	3,670.00	600.00	250.50	.....	.....	109.50	70.37	8,030.37
Westmoreland.....	1,035	350.00	187.08	83.00	181.36	.....	93.92	.....	1,930.36
Winchester.....	2,530	4,070.00	600.00	192.00	.....	.....	199.50	.....	7,591.50
Total.....	\$39,570	\$32,010.16	\$6,357.33	\$2,954.00	\$1,076.05	\$1,346.70	\$3,019.03	\$2,148.55	\$88,481.82

TABLE No. VI.—CHESHIRE COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Alstead	\$60.79	\$110.15	\$170.94	\$1,352.52	.....	\$66.00	.....	\$6.00	\$1,595.46
Chesterfield ...	175.00	75.00	250.00	1,510.00	.....	100.00	.....	115.00	1,975.00
Dublin	41.00	24.00	65.00	1,209.00	.....	54.75	.....	109.50	1,438.25
Fitzwilliam ...	142.46	27.86	170.32	1,956.20	\$200.00	110.00	\$15.75	260.05	2,712.32
Gilsum	83.19	8.55	91.74	962.60	.....	56.80	4.45	89.38	1,204.97
Harrisville	135.32	42.64	177.96	1,062.68	.....	57.00	11.00	154.46	1,463.10
Hinsdale	348.37	213.86	562.23	4,766.32	.....	195.83	10.00	1,510.67	7,045.05
Jaffrey	129.25	70.75	200.00	2,418.00	.....	26.40	4.16	1,104.45	3,753.01
Keene	1,680.00	820.00	2,500.00	16,793.33	1,200.00	240.00	.....	5,102.69	25,836.02
Marlborough...	163.58	82.28	245.86	2,758.00	333.33	67.51	10.00	.....	3,414.70
Marlow	46.69	89.17	135.86	1,008.85	.....	70.00	.....	102.95	1,317.66
Nelson	26.31	13.14	39.45	390.60	.....	27.00	.....	49.32	506.37
Richmond	106.26	25.03	131.29	716.00	.....	74.75	.....	221.23	1,143.27
Rindge	93.87	29.69	123.56	1,206.50	.....	81.60	2.00	538.17	1,951.83
Roxbury .....	.....	.....	.....	.....	.....	16.00	.....	84.00	100.00
Stoddard	56.53	10.52	67.10	509.50	.....	30.00	.....	121.41	728.01
Sullivan	83.38	54.53	137.91	883.50	.....	46.00	.....	83.74	1,151.15
Surry	37.00	18.96	55.96	405.00	.....	32.00	.....	126.57	619.53
Swanzy	134.80	83.58	218.38	2,973.56	.....	150.00	5.00	504.18	3,851.12
Troy	200.00	83.75	283.75	2,152.08	222.22	140.00	5.40	785.97	3,589.42
Walpole	300.00	326.11	626.11	5,325.74	.....	175.00	10.00	1,793.37	7,930.22
Westmoreland.	104.88	82.58	187.46	1,460.00	.....	90.00	.....	188.45	1,925.91
Winchester	485.67	121.50	607.17	4,489.30	.....	354.10	15.00	301.91	5,767.48
Total	\$4,634.40	\$2,413.65	\$7,048.05	\$56,309.28	\$1,955.55	\$2,260.74	\$92.76	\$13,353.47	\$81,019.85

TABLE No. VI.—*Continued.*—CHESHIRE COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Alstead			\$25.00	\$1,595.46	\$1,620.46	.0039	\$6.85	\$1.51
Chesterfield				1,975.00	1,975.00	.0031	15.96	1.95
Dublin				1,438.25	1,438.25	.0019	25.68	1.16
Fitzwilliam		\$41.06	49.11	2,712.32	2,802.49	.0059	16.36	1.56
Gilsum			43.58	1,204.97	1,248.55	.0046	13.68	.98
Harrisville		2.38	315.82	1,463.10	1,781.30	.0048	16.04	1.60
Hinsdale		338.29	1,153.49	7,045.05	8,536.83	.0083	23.86	1.29
Jaffrey				3,753.01	3,753.01	.0050	13.25	.75
Keene	\$13,600.00	2,422.50	943.24	25,836.02	42,801.76	.0017	22.74	1.95
Marlborough			90.00	3,414.70	3,504.70	.0049	14.72	1.02
Marlow			14.11	1,317.66	1,331.77	.0053	16.64	1.69
Nelson			49.01	506.37	555.38	.0029	15.56	1.31
Richmond				1,143.27	1,143.27	.0040	14.15	1.62
Rindge				1,951.83	1,951.83	.0038	16.54	1.05
Roxbury				*100.00	100.00	.0022	.....	.....
Stoddard				728.01	728.01	.0041	16.17	1.51
Sullivan				1,151.15	1,151.15	.0021	15.80	1.88
Surry				619.53	619.53	.0037	13.61	1.23
Swansey			239.71	3,851.12	4,090.83	.0053	16.48	.88
Troy				3,589.42	3,589.42	.0064	12.81	1.01
Waipole		45.50	1,085.51	7,930.22	9,061.23	.0055	18.60	1.28
Westmoreland				1,925.91	1,925.91	.0042	13.83	1.26
Winchester		80.00		5,767.48	5,847.48	.0055	15.00	1.50
Total	\$13,600.00	\$2,929.73	\$4,008.58	\$81,019.85	\$101,558.16	.0045	\$18.07	\$1.44

* Tuition — no school.

TABLE No. I.—COOS COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any year.	Least number.	Average number of weeks.
Berlin	1	19	18	.....	.....	34	34	34.00
Carroll	1	7	2	3	.....	29	28	28.14
Clarksville	1	5	.....	2	.....	30	20	24.40
Colebrook	2	14	4	2	.....	36	23	31.00
Columbia	1	10	.....	5	.....	30	20	26.94
Dalton	1	6	.....	4	.....	30	24	27.00
Dummer	1	5	.....	4	1	29	8	22.20
Errol	1	3	.....	1	.....	21	20	20.30
Gorham	1	8	5	1	.....	34	34	34.00
Jefferson	1	10	.....	3	1	30	24	29.40
Lancaster	2	18	7	2	1	36	27	31.33
Milan	1	9	4	.....	.....	28	25	25.77
Northumberland	1	10	4	3	1	34	24	31.50
Pittsburg	1	8	.....	3	1	30	20	25.00
Randolph	1	2	.....	2	.....	26	22	24.50
Shelburne	1	4	.....	2	1	20	20	20.00
Stark	1	8	2	1	.....	27	21	25.25
Stewartstown	2	11	1	5	2	36	26	26.90
Stratford	1	10	5	2	.....	34	24	32.10
Wentworth's Location	1	1	.....	.....	.....	30	30	30.00
Whitefield	2	14	8	4	1	35	30	32.71
Total	25	182	60	49	9	.....	.....	27.73

TABLE No. II.—COOS COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Berlin.....	6	.....	.....	20	\$36,275.00	\$400.00
Carroll.....	6	.....	.....	8	5,750.00	360.00
Clarksville.....	5	.....	.....	5	1,500.00	150.00
Colebrook.....	14	.....	.....	19	12,500.00	500.00
Columbia.....	10	.....	.....	10	2,260.00	500.00
Dalton.....	6	.....	.....	6	2,000.00	58.00
Dummer.....	5	.....	.....	5	2,000.00	100.00
Errol.....	3	.....	.....	4	2,500.00	350.00
Gorham.....	4	.....	.....	12	15,000.00	100.00
Jefferson.....	9	.....	1	11	9,500.00	500.00
Lancaster.....	13	.....	.....	19	21,600.00	450.00
Milan.....	7	.....	.....	9	6,000.00	100.00
Northumberland.....	9	.....	.....	12	8,000.00	75.00
Pittsburg.....	8	.....	.....	9	3,650.00	400.00
Randolph.....	2	.....	.....	2	1,000.00	100.00
Shelburne.....	4	.....	.....	4	2,500.00	50.00
Stark.....	7	.....	.....	8	4,000.00	150.00
Stewartstown.....	11	.....	.....	12	5,000.00	.....
Stratford.....	11	.....	.....	14	7,000.00	300.00
Wentworth's Location..	1	.....	.....	1	500.00	15.00
Whitefield.....	8	.....	.....	16	12,000.00	600.00
Total	149	.....	1	206	\$160,535.00	\$5,258.00

TABLE No. III.—COOS COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.								
Berlin.....	1,211	1,119	491	441	115	786	31	771	663	85	802	21
Carroll.....	64	55	74	61	15	120	.....	124	118	95	.....	.....
Clarksville.....	47	40	49	34	6	68	9	60	50	81	.....	6
Colebrook.....	198	212	195	251	47	340	59	378	340	89	.....	.....
Columbia.....	84	67	86	70	4	145	7	126	105	83	.....	.....
Dalton.....	60	80	50	70	.....	120	.....	92	80	86	.....	.....
Dummer.....	32	34	36	33	3	62	4	48	39	81	.....	.....
Errol.....	25	21	27	23	5	45	.....	36	31	86	.....	.....
Gorham.....	160	170	163	199	20	310	32	356	314	83	.....	.....
Jefferson.....	124	112	131	120	8	229	14	198	163	82	.....	.....
Lancaster.....	262	277	327	328	50	539	66	614	532	86	.....	.....
Milan.....	133	153	117	146	26	216	21	178	141	79	.....	1
Northumberland.....	200	225	179	196	48	317	10	349	331	94	.....	.....
Pittsburg.....	98	80	99	85	25	154	5	114	98	85	.....	.....
Randolph.....	11	12	11	12	3	20	.....	20	14	83	.....	.....
Shelburne.....	38	22	36	22	.....	58	.....	58	45	77	.....	.....
Stark.....	79	65	93	81	21	136	17	136	112	82	.....	.....
Stewartstown.....	109	131	101	129	17	207	6	188	175	87	.....	.....
Stratford.....	168	160	160	152	11	287	14	241	220	91	1	.....
Wentworth's Loca'n.....	8	6	10	6	1	15	.....	11	9	82	.....	.....
Whitefield.....	200	208	236	238	29	417	28	361	306	84	.....	1
Total.....	3,311	3,249	2,671	2,697	454	4,501	323	4,459	3,886	85	803	29

TABLE No. IV.—COOS COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Berlin.....	2	\$51.33	17	\$39.03	1	5	8	7	4
Carroll.....	1	24.00	11	26.07	2	5			
Clarksville.....	1	19.00	9	19.50	5	5			
Colebrook.....			14	28.00	1	5	4	1	1
Columbia.....	1	18.00	16	14.00	3	9	1	1	
Dalton.....			12	21.33	2	1	1	1	1
Dummer.....	1	24.00	7	23.00	2	4			
Errol.....			3	16.00			1	1	
Gorham.....			8	31.72			2	1	2
Jefferson.....	1	28.00	9	28.00	1	3	2	2	
Lancaster.....	1	83.33	17	32.99	2	5	7		2
Milan.....			18	28.00	5	4	3	3	1
Northumberland..	1	36.00	15	28.12	1		5	2	1
Pittsburg.....	2	24.66	14	21.70	3	6			
Randolph.....			2	18.00	2	2		1	
Shelburne.....	1	23.00	3	23.00	2	2			
Stark.....			8	24.00	1	2		1	
Stewartstown.....	1	40.00	11	20.00	1	9	1		
Stratford.....	2	46.00	11	24.86	1	4	5	1	1
Wentworth's Lo'n			1	22.66					
Whitefield.....			14	30.40	1	5	2	1	2
Total.....	15	\$34.77	220	\$24.78	36	76	43	23	15

TABLE No. V.—COOS COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Berlin.....	\$4,810.00	\$8,228.95	\$961.05	\$432.50			\$190.00	\$1,809.84	\$16,432.34
Carroll.....	630.00	450.00	160.00	71.50		\$287.78	66.00	44.25	1,709.53
Clarksville.....	255.00	200.00	75.00	46.00	\$21.82	129.35	27.00		754.17
Colebrook.....	1,700.00	1,600.00	300.00	210.50		784.50	120.00	791.62	5,507.22
Columbia.....	480.00	1,200.00		84.00		349.96			2,113.96
Dalton.....	366.00	334.00		60.00		171.19			931.19
Dummer.....	245.00	355.00		37.50	29.13	84.64	27.00	28.49	806.76
Errol.....	260.00	240.00		28.00		48.01			576.01
Gorham.....	1,065.00	4,435.00		190.50		842.85	98.25		6,631.60
Jefferson.....	615.00	1,550.00	250.00	124.50		542.12	140.00	335.37	3,556.99
Lancaster.....	3,525.00	4,601.70	900.00	337.50	219.00		183.80	123.64	9,898.64
Milan.....	600.00	900.00	200.00	137.50		466.70	61.70		2,365.90
Northumberland..	1,385.00	3,000.00	300.00	184.50	12.00	780.56	72.00	100.00	5,834.16
Pittsburg.....	705.00	800.00		82.50		233.00		5.00	1,825.50
Randolph.....	130.00	150.00		13.00	45.76	24.49			363.25
Shelburne.....	275.00	175.00	79.00	24.50		47.50	41.00		642.00
Stark.....	520.00	200.00		86.50	16.92	288.20	33.60	128.72	1,273.94
Stewartstown.....	700.00	1,200.00		137.50		590.00	17.08		2,644.58
Stratford.....	870.00	989.00	350.00	140.00		533.47	122.91	573.94	3,579.32
Wentworth's Lo'n	115.00	65.00		7.00				9.00	196.00
Whitefield.....	1,565.00	1,800.00	500.00	200.00	1,638.94	727.77	194.79	30.00	6,665.50
Total.....	\$20,816.00	\$32,481.65	\$4,075.05	\$2,644.50	\$1,983.57	\$6,932.09	\$1,395.73	\$3,979.87	\$74,308.46

TABLE No. VI.—COOS COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Tuant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Berlin.....	\$631.29	\$329.76	\$961.05	\$9,204.66	.....	\$200.00	.....	\$1,820.52	\$12,186.23
Carroll.....	129.50	30.50	160.00	1,182.33	.....	48.00	\$8.37	173.41	1,572.11
Clarksville.....	58.50	1.50	60.00	637.50	.....	8.50	.....	48.45	754.45
Colebrook.....	278.10	121.90	400.00	3,376.50	.....	112.75	.....	482.74	4,371.99
Columbia.....	70.00	16.75	86.75	1,378.71	.....	80.00	.....	60.00	1,605.46
Dalton.....	250.00	35.00	285.00	1,001.40	.....	71.75	5.00	101.05	1,464.20
Dummer.....	92.35	11.17	103.52	718.00	.....	45.50	.....	38.13	905.15
Errol.....	35.00	20.00	55.00	361.50	.....	45.00	.....	19.00	480.50
Gorham.....	227.17	238.56	465.73	3,472.50	.....	100.00	.....	476.92	4,515.15
Jefferson.....	274.00	53.00	327.00	2,385.00	.....	75.00	8.00	146.00	2,941.00
Lancaster.....	562.00	400.27	962.27	7,116.00	.....	245.00	10.00	2,073.88	10,407.15
Milan.....	150.00	25.00	175.00	1,874.40	.....	60.00	.....	175.00	2,284.40
Northumb'ria'd	183.75	166.25	350.00	2,771.00	.....	78.50	5.00	527.60	3,732.10
Pittsburg.....	91.83	19.19	111.02	1,154.70	.....	85.00	.....	179.13	1,529.85
Randolph.....	37.79	4.13	41.92	220.50	.....	14.15	.....	5.25	281.82
Shelburne.....	50.00	29.00	79.00	373.00	.....	20.00	3.00	55.00	530.00
Stark.....	109.17	43.13	152.30	1,221.15	.....	58.00	.....	82.59	1,514.04
Stewartstown..	100.00	200.00	300.00	1,950.00	.....	50.00	6.00	300.00	2,606.00
Stratford.....	275.00	75.00	350.00	2,187.10	.....	65.00	.....	519.66	3,121.76
Wentw'th's L'n	9.38	4.51	13.89	170.00	.....	4.50	.....	14.70	213.09
Whitefield.....	469.99	87.09	557.08	4,896.57	.....	75.00	48.00	16.12	5,582.77
Total.....	\$4,084.82	\$1,911.71	\$5,996.53	\$47,652.52	.....	\$1,531.65	\$93.37	\$7,315.15	\$62,599.22

TABLE No. VI.—*Continued.*—COOS COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Berlin		\$1,000.00	\$3,522.17	\$12,186.23	\$16,708.40	.0053	\$21.66	\$1.24
Carroll				1,572.11	1,572.11	.0054	11.87	1.29
Clarksville	\$577.00		23.00	754.45	1,354.45	.0040	12.96	1.00
Colebrook	175.00		428.86	4,371.99	4,975.85	.0054	12.70	1.06
Columbia			25.00	1,605.46	1,630.46	.0030	12.93	.69
Dalton		200.00	200.00	1,464.20	1,864.20	.0016	22.19	3.10
Dummer				905.15	905.15	.0043	14.84	1.89
Errol				480.50	480.50	.0026	12.98	1.49
Gorham		2,271.21	212.44	4,515.15	6,998.80	.0056	19.65	1.30
Jefferson	450.00		285.00	2,941.00	3,676.00	.0067	16.24	1.65
Lancaster			403.97	10,407.15	10,811.12	.0060	17.61	1.57
Milan			100.00	2,284.40	2,384.40	.0050	13.39	.98
Northumberland			387.61	3,732.10	4,119.71	.0058	11.08	1.00
Pittsburg				1,529.85	1,529.85	.0057	13.41	.97
Randolph			77.75	281.82	359.57	.0048	24.91	2.09
Shelburne				530.00	530.00	.0033	8.74	.94
Stark			100.00	1,514.04	1,614.04	.0032	11.87	1.12
Stewartstown				2,606.00	2,606.00	.0068	13.86	1.59
Stratford			550.00	3,121.76	3,671.76	.0060	12.71	1.21
Wentworth's Lo'n	75.00			213.09	288.09	.0030	17.29	1.18
Whitefield			576.38	5,582.77	6,159.15	.0082	17.08	1.54
Total	\$1,277.00	\$3,471.21	\$6,892.18	\$62,599.22	\$74,239.61	.0048	\$16.64	\$1.34

TABLE No. I.—GRAFTON COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any year.	Least number.	Average number of weeks.
Alexandria.....	1	9		4	1	26	20	22.33
Ashland.....	2	7	5			36	20	31.57
Bath.....	2	6		3		32	24	28.90
Benton.....	1	2		1		32	32	32.00
Bethlehem.....	2	11	3	2		34	23	30.00
Bridgewater.....	1	6		4	2	24	20	21.33
Bristol.....	2	10	5	1		36	22	30.00
Campton.....	1	9				23	23	23.00
Canaan.....	2	11	2	3	2	34	18	25.82
Dorchester.....	1	5		2		28	25	26.20
Easton.....	1	3		2		20	16	18.33
Ellsworth.....	1	2		1	1	14	14	14.00
Enfield.....	2	10	3	1		35	24	30.00
Franconia.....	1	2	2			36	36	36.00
Grafton.....	1	9		2	1	26	23	24.77
Groton.....	1	4		2		28	24	26.50
Hanover.....	2	14	4	3	2	36	10	27.50
Haverhill.....	2	19	11	4		36	29	31.47
Hebron.....	1	2				27	26	26.50
Holderness.....	1	8		2	3	25	19	24.50
Landaff.....	1	5		2	1	29	23	23.60
Lebanon.....	3	25	13	2	2	36	20	33.60
Lincoln.....	1	3	2			24	24	24.00
Lisbon.....	3	12	4	4		36	9	29.41
Littleton.....	2	24	14	4	4	38	10	28.50
Livermore*.....								
Lyman.....	1	5		2		29	10	22.60
Lyme.....	1	11	2	5		29	9	27.18
Monroe.....	1	5				30	20	28.00
Orange.....	1	4		3		21	20	20.25
Orford.....	1	7	4	1		32	30	31.57
Piermont.....	1	9		4		30	10	27.22
Plymouth.....	1	10	4	3		38	36	36.80
Rumney.....	1	6	1			30	30	30.00
Thornton.....	1	7		3	1	28	18	28.00
Warren.....	1	9	2	1	1	30	20	22.33
Waterville*.....								
Wentworth.....	1	6		2		27	25	25.66
Woodstock.....	1	3	2			30	29	29.66
Total.....	50	300	53	73	21			27.00

* No schools.

TABLE No. II.—GRAFTON COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Alexandria.....	9	.....	.....	9	\$3,000 00	\$100 00
Ashland.....	3	.....	.....	7	10,800 00	300 00
Bath.....	7	1	.....	8	4,533 00	335 00
Benton.....	2	.....	.....	2	800 00	100 00
Bethlehem.....	10	.....	.....	13	12,000 00	1,500 00
Bridgewater.....	6	.....	1	6	2,000 00	100 00
Bristol.....	7	1	.....	11	6,000 00	.....
Campton.....	12	.....	.....	12	6,300 00	50 00
Canaan.....	12	.....	.....	15	8,000 00	200 00
Dorchester.....	7	1	.....	7	1,200 00	60 00
Easton.....	3	.....	.....	3	1,000 00	50 00
Ellsworth.....	2	.....	.....	2	500 00	25 00
Enfield.....	11	.....	.....	14	6,000 00	1,000 00
Franconia.....	2	.....	.....	2	500 00	75 00
Grafton.....	11	1	.....	11	4,300 00	50 00
Groton.....	5	1	.....	5	1,000 00	50 00
Hanover.....	13	.....	1	20	28,500 00	650 00
Haverhill.....	13	1	1	25	42,000 00	100 00
Hebron.....	2	.....	.....	2	1,000 00	50 00
Holderness.....	9	.....	.....	9	2,000 00	300 00
Landaff.....	6	.....	.....	6	2,200 00	50 00
Lebanon.....	15	1	.....	29	37,900 00	300 00
Lincoln.....	2	.....	.....	3	700 00	.....
Lisbon.....	10	.....	.....	15	36,000 00	400 00
Littleton.....	14	.....	.....	27	59,750 00	500 00
Livermore.....	7	.....	.....	7	1,500 00	75 00
Lyman.....	7	1	.....	7	1,500 00	75 00
Lyme.....	11	.....	.....	12	2,700 00	.....
Monroe.....	7	1	.....	8	2,000 00	50 00
Orange.....	5	1	.....	5	1,000 00	.....
Orford.....	6	.....	.....	8	5,300 00	250 00
Piermont.....	10	.....	.....	11	4,000 00	200 00
Plymouth.....	5	.....	.....	14	*9,200 00	1,500 00
Rumney.....	5	.....	.....	6	4,000 00	200 00
Thornton.....	10	3	.....	10	3,500 00	150 00
Warren.....	8	.....	.....	9	2,500 00	200 00
Waterville, no school.....	.....	.....	.....	.....	.....	.....
Wentworth.....	8	.....	.....	8	1,125 00	100 00
Woodstock.....	4	.....	.....	4	2,250 00	100 00
Total.....	279	13	3	365	\$317,058 00	\$9,160 00

* Not including State Normal School.

TABLE No. III.—GRAFTON COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant of- ficers' enu- meration.		Enrolled for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Average mem- ber- ship.	Average daily at- tendance.	Per cent. of attend- ance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.								
Alexandria....	75	64	77	66	2	139	2	110	94	75	.....	.....
Ashland.....	99	90	107	97	17	174	13	165	139	86	.....	.....
Bath.....	68	47	110	90	9	183	3	147	124	88	.....	1
Benton.....	18	15	21	17	1	34	3	29	25	86	.....	.....
Bethlehem.....	154	169	159	161	20	275	25	282	276	95	.....	.....
Bridgewater..	20	27	20	27	5	39	3	44	42	93	.....	.....
Bristol.....	127	100	140	117	18	227	12	206	181	87	.....	15
Campton.....	82	82	91	78	17	142	10	132	118	89	.....	7
Canaan.....	117	103	138	109	22	215	10	200	165	82	.....	3
Dorchester....	51	31	65	46	12	98	1	74	64	86	.....	.....
Easton.....	23	14	27	15	3	36	3	42	35	85	.....	.....
Ellsworth.....	17	9	17	9	1	23	2	22	19	84	.....	.....
Enfield.....	144	157	166	185	40	307	4	232	195	84	.....	.....
Franconia.....	42	51	31	37	5	63	.....	52	47	89	.....	1
Grafton.....	72	63	83	84	19	121	27	185	115	85	.....	.....
Groton.....	33	32	39	37	5	65	6	56	43	84	.....	.....
Hanover.....	148	156	156	200	16	304	36	293	264	87	.....	.....
Haverhill.....	279	312	332	363	62	580	53	529	463	87	.....	1
Hebron.....	16	26	17	26	3	39	1	34	29	85	.....	.....
Holderness....	37	42	41	55	8	77	11	96	87	90	.....	2
Landaff.....	48	37	58	47	7	91	7	59	47	79	.....	6
Lebanon.....	396	452	486	476	67	830	65	757	650	84	.....	3
Lincoln.....	52	32	50	33	21	62	.....	38	20	52	.....	.....
Lisbon.....	174	176	207	199	31	330	45	336	275	81	.....	.....
Littleton.....	383	432	401	419	72	679	69	606	497	82	.....	.....
Livermore.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyman.....	56	43	54	47	6	94	1	70	56	80	.....	.....
Lyme.....	126	124	122	124	21	209	16	181	162	89	.....	.....
Monroe.....	55	65	55	65	3	113	4	86	77	89	.....	.....
Orange.....	16	23	22	25	5	39	3	41	35	85	.....	.....
Orford.....	105	100	112	104	17	191	8	176	153	87	.....	.....
Piermont.....	60	58	88	65	18	116	19	106	92	86	.....	.....
Plymouth.....	150	140	191	185	4	302	70	310	267	86	.....	.....
Rumney.....	62	59	86	72	10	133	15	122	99	81	.....	.....
Thornton.....	41	40	57	59	1	113	2	101	91	89	.....	.....
Warren.....	63	68	69	72	16	122	3	122	101	82	.....	.....
Waterville.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth.....	48	49	59	66	12	110	3	103	86	85	.....	.....
Woodstock.....	56	33	61	37	9	82	7	71	65	83	.....	.....
Total.....	3,513	3,520	4,015	3,914	605	6,757	567	6,165	5,928	86	2	37

TABLE No. IV.—GRAFTON COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high schools.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Alexandria			9	\$24.00	1	7	2		
Ashland			7	34.72	1	2	3		
Bath			13	29.15	1	3	1		
Benton			2	28.00		1		1	
Bethlehem			11	26.50			4	4	1
Bridgewater	1	\$21.00	5	18.00	2	3			
Bristol			10	30.70		1	3		
Campton			9	22.65		8	2		
Canaan	3	28.00	13	24.00	1	12		1	
Dorchester			9	21.50		1		3	1
Easton			5	21.13	2	3			
Ellsworth			3	20.33		1	1		
Enfield			9	25.80	5	9		1	
Franconia			2	32.00			2		
Grafton			9	25.00	1	8			
Groton			6	20.75	1	5			
Hanover			15	44.56	2	3	6		3
Haverhill			19	31.49	4	5	15	2	4
Hebron			2	24.00					
Holderness			13	26.45		2	2		
Landaff	2	26.00	7	20.18	2	2			
Lebanon			29	28.75	1	8	2		8
Lincoln			3	28.00	1				
Lisbon	1	24.00	18	30.66	1	4	1		2
Littleton	1	22.00	23	32.17	8	3	14		3
Livermore									
Lyman	3	25.33	6	24.77	2	2	1		
Lyme	1	28.00	11	23.50	2		1		
Monroe			8	20.53	3	3			
Orange	1	12.00	8	13.87	5	9			
Orford	2	43.00	5	27.20	4	3		1	
Piermont	1	16.00	16	23.56	1	10	1	1	
Plymouth	1	32.00	10	41.00	4	2	5	2	5
Rumney			11	19.66	1	4	2	1	1
Thornton	1	24.00	6	24.00	2	3	1	1	
Warren			9	25.30	4	2	1	2	
Waterville									
Wentworth			8	23.80		6			
Woodstock			3	30.30	1	1	1		
Total	18	\$25.11	252	\$26.16	63	126	51	20	28

TABLE No. V.—GRAFTON COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1890.	Dog licenses.	Amount from all other sources.	Total.
Alexandria..	\$495.00	\$300.00	.....	\$66.50	\$18.00	\$137.97	\$114.00	\$32.00	\$1,163.47
Ashland.....	1,250.00	1,450.00	.....	134.50	.....	.....	128.00	.....	2,962.50
Bath.....	895.00	600.00	.....	99.00	.....	.....	65.00	75.21	1,734.21
Benton.....	215.00	185.00	.....	20.00	.....	38.25	19.00	14.00	491.25
Bethlehem..	1,525.00	4,600.00	\$425.00	155.50	.....	462.33	164.80	198.00	7,530.63
Bridgewater	270.00	272.00	30.00	32.50	.....	72.41	65.54	2.75	745.20
Bristol.....	2,055.00	1,300.00	.....	129.50	.....	.....	153.00	72.60	3,710.10
Campton.....	795.00	455.00	.....	87.50	.....	189.34	125.00	.....	1,651.84
Canaan.....	1,300.00	1,000.00	219.17	142.00	.....	.....	40.00	40.00	2,741.17
Dorchester..	185.00	275.00	87.32	82.50	.....	173.62	59.40	59.00	921.84
Easton.....	280.00	.....	.....	30.00	24.00	.....	14.40	.....	348.40
Ellsworth...	55.00	125.00	.....	16.50	.....	75.91	13.00	.....	285.41
Enfield.....	1,065.00	700.00	177.68	155.50	45.18	.....	209.50	.....	2,952.86
Franconia...	800.00	300.00	64.00	36.00	9.00	.....	.....	19.00	1,228.00
Grafton.....	730.00	200.00	.....	80.50	.....	241.93	75.80	135.23	1,463.46
Groton.....	210.00	250.00	.....	43.00	.....	155.05	45.57	.....	703.62
Hanover.....	2,535.00	2,500.00	506.14	183.50	140.38	.....	247.60	372.72	6,485.34
Haverhill...	2,770.00	6,000.00	400.00	323.50	568.38	.....	131.05	148.38	10,341.31
Hebron.....	230.00	50.00	16.47	25.50	.....	49.69	25.20	4.80	401.66
Holderness..	505.00	500.00	50.00	45.00	.....	138.80	90.53	38.50	1,367.83
Landaff.....	510.00	300.00	.....	45.50	45.00	.....	28.57	.....	929.07
Lebanon.....	5,680.00	7,437.47	718.28	459.00	.....	.....	285.30	1,625.17	16,205.22
Lincoln.....	490.00	200.00	.....	48.00	.....	.....	44.00	.....	782.00
Lisbon.....	2,355.00	4,793.40	.....	201.00	.....	.....	200.60	564.22	8,114.22
Littleton....	3,750.00	8,250.00	800.00	415.00	.....	.....	360.60	523.00	14,098.00
Livermore...	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyman.....	340.00	300.00	.....	46.50	.....	90.93	38.02	115.74	931.19
Lyme.....	1,010.00	580.18	29.31	127.00	161.03	.....	120.26	10.00	2,037.78
Monroe.....	555.00	400.00	.....	59.50	.....	.....	57.00	.....	1,071.50
Orange.....	130.00	170.00	.....	24.00	.....	110.54	.....	.....	434.54
Orford.....	740.00	1,100.00	227.00	111.50	.....	301.08	90.68	175.29	2,754.55
Piermont...	635.00	500.00	.....	83.50	336.04	192.02	72.20	101.98	1,920.74
Plymouth...	2,365.00	2,500.00	550.00	194.00	.....	.....	143.40	29.00	5,781.40
Runney.....	820.00	1,100.00	200.00	77.00	.....	.....	82.65	7.20	2,286.85
Thornton....	340.00	535.00	.....	62.00	78.75	255.59	81.20	450.74	1,803.28
Warren.....	705.00	300.00	121.98	66.00	167.50	.....	102.60	.....	1,463.08
Waterville...	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth..	520.00	500.00	100.00	51.50	12.50	.....	92.00	.....	1,276.00
Woodstock..	395.00	300.00	.....	57.50	.....	148.84	42.00	.....	943.34
Total	\$40,105.00	\$50,328.05	\$4,722.35	\$4,017.00	\$1,605.76	\$2,834.30	\$3,635.87	\$4,814.53	\$112,062.86

TABLE No. VI.—GRAFTON COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Tuant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Alexandria..	\$71.11	\$22.96	\$94.07	\$1,153.00	.....	\$90.00	\$6.00	\$28.57	\$1,371.64
Ashland.....	228.68	172.73	401.41	2,063.50	\$125	.....	50.00	.....	2,639.91
Bath.....	5.94	38.81	44.75	1,180.10	.....	46.56	.....	182.20	1,433.61
Benton.....	55.25	8.75	64.00	330.00	.....	20.00	5.00	153.00	572.00
Bethlehem.....	300.00	100.00	400.00	3,200.00	.....	125.50	.....	55.13	3,780.63
Bridgewater..	22.00	7.00	29.00	507.00	.....	36.00	.....	16.00	588.00
Bristol.....	141.44	46.68	188.12	2,311.00	.....	88.00	12.00	714.06	3,313.18
Campton.....	90.00	10.00	100.00	1,122.00	.....	67.42	.....	271.17	1,560.59
Canaan.....	118.15	101.02	219.17	2,226.00	.....	84.00	23.00	195.00	2,747.17
Dorchester...	81.32	6.00	87.32	704.12	.....	52.29	5.00	66.75	915.48
Easton.....	3.61	7.64	11.25	290.60	.....	15.00	4.00	22.12	342.97
Ellsworth.....	29.17	1.50	30.67	129.50	.....	5.50	.....	.35	166.02
Enfield.....	165.87	11.81	177.68	2,658.50	.....	120.00	19.10	350.00	3,325.28
Franconia....	50.00	14.00	64.00	689.66	.....	20.00	.....	551.85	1,325.51
Grafton.....	107.92	5.49	113.41	1,332.75	.....	68.97	10.00	50.84	1,575.97
Groton.....	30.38	4.88	35.26	549.25	.....	24.25	3.50	184.76	797.02
Hanover.....	506.14	.....	506.14	4,322.32	.....	245.00	20.00	1,179.57	6,273.03
Haverhill....	591.04	196.92	787.96	7,084.00	.....	150.00	8.75	2,728.42	10,759.13
Hebron.....	15.00	1.47	16.47	321.00	.....	16.00	3.25	24.25	380.97
Holderness....	20.00	48.00	68.00	1,272.00	.....	71.20	9.00	24.00	1,444.20
Landaff.....	36.83	27.19	64.02	676.50	.....	46.75	2.00	100.20	889.47
Lebanon.....	558.61	418.29	976.90	9,534.28	.....	380.42	25.00	3,553.91	15,470.51
Lincoln.....	126.16	105.66	231.82	396.00	.....	9.00	.....	229.07	865.89
Lisbon.....	373.14	313.18	686.32	5,235.75	.....	134.89	10.00	1,464.02	7,530.98
Littleton.....	830.62	696.64	1,527.26	8,716.26	.....	222.50	.....	1,302.06	11,768.08
Livermore....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyman.....	23.53	3.63	27.16	802.00	.....	22.00	.....	53.59	904.75
Lyme.....	29.31	8.53	37.84	1,681.50	.....	75.00	.....	313.92	2,108.26
Monroe.....	15.00	20.68	35.68	720.00	.....	25.00	.....	234.15	1,014.83
Orange.....	20.28	1.20	21.48	359.75	.....	21.50	.....	77.45	480.18
Orford.....	181.60	45.40	227.00	1,774.00	.....	107.24	1.25	300.56	2,410.05
Piermont.....	39.68	106.42	146.10	1,462.00	.....	104.62	.....	136.45	1,849.17
Plymouth.....	250.00	183.99	433.99	5,073.00	.....	150.00	.....	277.32	5,934.31
Runney.....	177.74	35.53	213.27	885.00	.....	98.21	4.00	58.05	1,258.53
Thornton.....	58.91	58.85	117.76	1,124.75	.....	63.83	.....	207.11	1,513.45
Warren.....	100.67	21.31	121.98	1,269.00	.....	50.00	.....	59.71	1,500.69
Waterville....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth....	93.39	8.00	101.39	885.00	.....	57.00	.....	264.46	1,307.85
Woodstock....	.....	129.56	129.56	673.73	.....	28.00	.....	.....	831.29
Total.....	\$5,548.49	\$2,989.72	\$8,538.21	\$74,714.82	\$125	\$2,941.65	\$220.85	\$15,410.07	\$101,950.60

TABLE No. VI.—*Continued.*—GRAFTON COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Alexandria..				\$1,371.64	\$1,371.64	.0023	\$12.39	\$0.85
Ashland.....		\$448.64	\$95.00	2,639.91	3,183.55	.0058	19.29	2.43
Bath.....			30.54	1,433.61	1,464.15	.0050	18.40	.56
Benton.....			2.00	572.00	574.00	.0035	19.81	2.20
Bethlehem..	\$1,500.00	500.00	1,750.00	3,780.63	7,530.63	.0045	21.53	2.68
Bridgewater	215.00			588.00	803.00	.0053	14.00	.56
Bristol.....			247.60	3,313.18	3,560.78	.0045	18.53	.98
Campton.....			63.12	1,560.59	1,623.71	.0041	12.30	.75
Canaan.....			75.25	2,747.17	2,822.42	.0029	14.11	1.10
Dorchester..			53.27	915.48	968.75	.0075	13.09	2.08
Easton.....				342.97	342.97	.0027	8.18	.26
Ellsworth....				166.02	166.02	.0065	7.10	1.39
Enfield.....				3,325.28	3,325.28	.0059	14.28	.76
Franconia....			14.38	1,325.51	1,339.89	.0030	25.77	1.23
Grafton.....			52.08	1,575.97	1,628.05	.0063	12.06	.84
Groton.....			6.67	797.02	803.69	.0078	15.11	.66
Hanover.....		1,406.05	160.00	6,273.03	7,839.08	.0050	12.56	1.73
Haverhill....	2,000.00	2,760.00	156.60	10,759.13	15,675.73	.0085	24.20	1.48
Hebron.....			102.82	380.97	483.79	.0051	14.23	.48
Holderness..			120.00	1,444.20	1,564.20	.0034	16.27	1.93
Landaff.....			48.51	889.47	937.98	.0032	13.37	1.00
Lebanon.....		1,587.25	168.79	15,470.51	17,226.55	.0066	21.43	1.29
Lincoln.....	111.35		115.15	865.89	1,092.39	.0052	25.79	3.32
Lisbon.....		960.00		7,530.98	8,490.98	.0075	25.27	2.04
Littleton....	309.02	2,645.74	200.00	11,768.08	14,922.84	.0088	24.11	1.36
Livermore....								
Lyman.....			78.50	904.75	983.25	.0040	13.89	.38
Lyme.....			143.36	2,108.26	2,251.62	.0046	13.68	.23
Monroe.....				1,014.83	1,014.83	.0032	11.62	.41
Orange.....			66.13	480.18	546.31	.0080	13.45	.53
Orford.....				2,410.05	2,410.05	.0062	13.69	1.29
Piermont....				1,849.17	1,849.17	.0035	17.44	1.37
Plymouth....				5,934.31	5,934.31	.0066	19.46	1.72
Rumney.....			50.00	1,258.53	1,308.53	.0060	10.72	1.75
Thornton....			106.84	1,513.45	1,620.29	.0080	14.87	1.16
Warren.....			96.93	1,500.69	1,597.62	.0038	13.09	1.00
Waterville....								
Wentworth..			17.53	1,307.85	1,325.38	.0058	12.74	.90
Woodstock..				831.29	831.29	.0032	11.70	1.67
Total.....	\$4,135.37	\$10,307.68	\$4,021.07	\$101,950.60	\$120,414.72	.0052	\$19.53	\$1.38

TABLE No. I.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any year.	Least number.	Average number of weeks.
Amherst.....	1	9	.....	5	1	33	31	32.77
Antrim.....	1	10	4	2	2	33	20	26.90
Bedford.....	1	10	.....	4	1	30	30	30.00
Bennington.....	1	4	3	.....	.....	34	24	31.50
Brookline.....	1	3	1	.....	.....	32	22	28.00
Deering.....	1	6	.....	1	1	22	20	21.16
Francestown.....	1	6	2	4	.....	30	20	27.83
Goffstown.....	2	15	4	4	3	36	21	31.07
Greenfield.....	1	5	2	3	.....	33	22	26.80
Greenville.....	1	4	4	.....	.....	36	36	36.00
Hancock.....	1	5	.....	.....	.....	26	26	26.00
Hillsborough.....	2	17	5	13	4	36	27	30.00
Hollis.....	1	5	2	1	.....	35	30	31.00
Hudson.....	1	7	6	1	.....	29	11	24.28
Lyndeborough.....	1	5	.....	3	1	29	26	27.20
Litchfield.....	1	3	.....	.....	.....	30	30	30.00
Manchester.....	1	113	108	2	.....	37	37	37.00
Mason.....	1	5	.....	3	.....	36	11	29.60
Merrimack.....	1	10	4	3	.....	32	26	27.30
Milford.....	1	13	13	.....	2	36	36	36.00
Mont Vernon.....	1	5	.....	4	.....	34	29	32.00
Nashua.....	1	73	67	.....	.....	36	36	36.00
New Boston.....	1	8	2	2	.....	31	28	29.87
Ipswich.....	1	7	.....	2	.....	36	12	34.28
Pelham.....	1	5	.....	.....	.....	33	33	33.00
Peterborough.....	1	12	1	2	.....	35	26	32.08
Sharon.....	1	2	.....	2	.....	21	20	20.50
Temple.....	1	3	.....	1	.....	30	20	26.06
Weare.....	1	14	.....	5	.....	30	19	28.14
Wilton.....	1	11	5	3	.....	36	30	31.63
Windsor.....	1	2	.....	2	.....	21	20	20.50
Total	33	402	233	72	15	.....	.....	29.50

TABLE No. II.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture and sites.	Estimated value of apparatus.
Amherst.....	10	.....	.....	12	\$10,100.00	\$475.00
Antrim.....	7	.....	.....	13	15,175.00	250.00
Bedford.....	10	.....	.....	10	5,000.00	300.00
Bennington.....	3	.....	.....	4	3,900.00	25.00
Brookline.....	4	.....	.....	4	4,500.00	300.00
Deering.....	9	.....	.....	9	3,000.00	150.00
Francestown.....	8	1	.....	9	4,000.00	175.00
Goffstown.....	11	.....	.....	16	17,600.00	200.00
Greenfield.....	4	.....	.....	5	5,000.00	150.00
Greenville.....	3	.....	.....	6	4,800.00	250.00
Hancock.....	8	.....	.....	9	6,000.00	500.00
Hillsborough.....	17	.....	.....	23	34,000.00	1,000.00
Hollis.....	7	1	.....	10	10,500.00	400.00
Hudson.....	7	.....	.....	11	15,000.00	300.00
Lyndeborough.....	8	.....	.....	8	1,700.00	25.00
Litchfield.....	4	.....	.....	4	2,500.00	200.00
Manchester.....	24	.....	.....	138	739,056.00	45,000.00
Mason.....	6	.....	.....	6	2,500.00	.....
Merrimack.....	9	1	.....	14	13,000.00	400.00
Milford.....	10	.....	.....	24	70,000.00	500.00
Mont Vernon.....	4	.....	.....	5	1,800.00	100.00
Nashua.....	19	.....	.....	82	308,433.00	25,000.00
New Boston.....	10	.....	.....	12	7,600.00	125.00
New Ipswich.....	8	.....	.....	8	4,400.00	250.00
Pelham.....	6	.....	.....	6	6,023.00	1,200.00
Peterborough.....	8	1	.....	18	25,200.00	1,000.00
Sharon.....	2	.....	.....	2	500.00	12.00
Temple.....	6	.....	.....	6	2,500.00	50.00
Weare.....	15	.....	.....	19	9,700.00	250.00
Wilton.....	8	1	.....	13	30,000.00	.....
Windser.....	1	.....	.....	1	350.00	50.00
Total.....	256	5	.....	507	\$1,360,037.00	\$78,637.00

TABLE No. III.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.								
Amherst.....	91	82	91	82	3	167	3	141	125	88	.....	.....
Antrim.....	123	100	162	132	17	250	27	247	229	97	.....	.....
Bedford.....	114	92	104	99	19	182	2	156	130	83	10	1
Bennington.....	54	43	58	50	9	97	2	86	79	91	.....	.....
Brookline.....	47	44	37	33	.....	68	2	61	52	82	.....	.....
Deering.....	37	47	50	57	13	93	1	86	80	93	.....	.....
Francetown.....	54	58	57	57	10	98	6	87	78	89	.....	.....
Goffstown.....	159	149	199	200	31	333	35	338	278	82	.....	.....
Greenfield.....	70	62	62	50	9	101	2	67	57	89	.....	.....
Greenville.....	148	185	70	70	16	123	1	138	125	90	192	.....
Hancock.....	59	62	72	58	7	120	3	102	89	86	.....	.....
Hillsborough.....	166	168	206	210	39	361	16	334	301	90	.....	.....
Hollis.....	82	78	79	89	9	143	16	169	160	91	.....	.....
Hudson.....	108	107	109	108	33	182	2	215	212	98	1	.....
Lyndeborough.....	56	38	56	38	9	80	5	94	68	72	.....	5
Litchfield.....	25	23	25	24	1	48	.....	38	29	87	.....	2
Manchester.....	4,480	4,906	2,786	2,745	535	4,680	316	4,552	4,127	90	3,952	.....
Mason.....	34	24	51	37	11	77	.....	62	56	91	.....	.....
Merrimack.....	76	76	96	98	27	165	2	150	133	88	.....	.....
Milford.....	326	284	373	357	56	599	75	607	551	90	.....	.....
Mont Vernon.....	18	32	22	39	10	47	4	47	41	87	.....	1
Nashua.....	2,421	2,314	1,845	1,821	227	3,230	209	2,604	2,351	88	1,600	.....
New Boston.....	86	89	92	94	19	160	7	162	150	90	.....	.....
New Ipswich.....	82	65	95	70	17	146	2	97	86	86	20	15
Pelham.....	61	78	61	72	15	113	5	106	93	87	4	2
Peterborough.....	203	205	208	211	29	362	28	334	290	86	.....	2
Sharon.....	11	13	12	9	1	20	.....	21	19	90	.....	.....
Temple.....	22	36	20	34	7	45	2	54	45	82	.....	1
Weare.....	110	128	142	125	20	237	10	206	188	90	.....	.....
Wilton.....	177	179	196	191	36	339	12	307	270	88	.....	.....
Windsor.....	4	4	4	4	1	7	.....	7	6	85	.....	.....
Total.....	9,504	9,771	7,439	7,264	1,235	12,673	795	11,275	10,498	93	5,770	29

TABLE No. IV.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Amherst.....			9	\$28.11	2				1
Antrim.....	1	\$48.00	9	29.66	2		2	2	1
Bedford.....			10	27.80	4	2	3		
Bennington.....	1	38.00	5	30.00			1		1
Brookline.....			3	32.00	1		1	1	
Deering.....			11	24.00	4	4			
Francestown.....			12	25.33	1		1	3	
Goffstown.....	1	26.00	20	28.67	6		5	1	2
Greenfield.....			5	22.40				1	
Greenville.....			4	37.00	1		1	1	
Hancock.....	1	34.00	9	28.45	2	2		1	1
Hillsborough.....			24	28.00	1	8	3		2
Hollis.....			6	31.00	1		2		2
Hudson.....			7	24.86					
Lyndeborough.....	1	32.00	4	28.00	1	2		1	1
Litchfield.....			5	26.88		2	1		
Manchester.....	12	122.92	109	55.75	2		15	82	18
Mason.....			8	30.97			5		
Merrimack.....			11	28.66	2		4	1	
Milford.....			19	40.28	3		6	4	4
Mont Vernon.....			5	24.80	4				
Nashua.....	2	87.50	75	45.22	2		9	39	9
New Boston.....	1	32.00	7	28.56	1				
New Ipswich.....			7	30.00	1		2	6	
Pelham.....			5	32.00	1		1		
Peterborough.....	1	32.00	12	30.33	5		5		1
Sharon.....			2	24.00		1		1	
Temple.....			3	26.33			2		1
Weare.....	3	28.00	20	28.03	4	4	3		2
Wilton.....			11	35.45	2		3		3
Windsor.....			4	18.00	2	2			
Total.....	24	\$48.04	441	\$30.01	55	27	75	143	49

TABLE No. V.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Amherst.....	\$1,570	\$3,160.34	\$216.30	\$90.00	\$530.77		\$179.64	\$79.20	\$5,826.25
Antrim.....	1,485	2,759.63	250.00	141.00	55.00		92.00	139.38	4,922.01
Bedford.....	1,605	654.09	128.99	105.00			214.20		2,707.28
Bennington.....	550	500.00		60.00		\$174.95	93.00	52.14	1,430.09
Brookline.....	655	150.00	100.00	41.00			199.50		1,145.50
Deering.....	485	150.00		54.50	60.00		144.54	5.75	899.79
Francestown.....	915	350.00	74.70	60.50			74.25	24.50	1,498.95
Goffstown.....	3,255	1,677.50	451.57	181.50			307.55	146.16	6,019.28
Greenfield.....	640	375.00		56.50			86.40	55.50	1,213.40
Greenville.....	1,350	700.00		70.50			115.80	82.00	2,318.30
Hancock.....	795	405.00	150.00	68.50			72.45		1,490.95
Hillsborough.....	2,700	3,175.00	521.97	207.50			350.80	159.37	7,114.64
Hollis.....	1,230	816.73	164.65	86.00	558.73		153.22	30.00	3,039.33
Hudson.....	1,630	300.00	108.29	100.50			299.59	23.66	2,462.04
Lyndeborough..	570	400.00		49.50	23.03		90.25		1,132.78
Litchfield.....	590			20.50			42.50		653.00
Manchester.....	75,140	45,910.00		2,642.00				920.25	124,612.25
Mason.....	580	101.00		47.50	669.80		122.48		1,520.78
Merrimack.....	1,685	848.13	195.90	113.50	361.93		147.90	61.00	3,413.36
Milford.....	4,670	8,330.00		342.00			351.77	324.25	14,018.02
Mont Vernon....	570	430.00		23.00			73.80	100.00	1,136.80
Nashua.....	30,405	34,415.00		1,841.50			1,185.65	280.00	68,127.15
New Boston.....	1,550	650.00	189.07	102.50	700.00		175.80	487.08	3,854.45
New Ipswich....	1,040	760.00		80.50	473.96		131.85		2,486.31
Pelham.....	955	400.00	150.00	63.50			140.55		1,709.05
Peterborough...	3,320	2,230.00	500.00	221.00			296.17	54.00	6,621.17
Sharon.....	125	125.00	12.00	14.50		28.46	15.60		320.56
Temple.....	355	275.00		28.00			63.36		721.36
Weare.....	1,815	900.00		130.50	225.26		149.07	165.61	3,385.44
Wilton.....	2,620	2,880.00		192.00	528.46			44.30	6,264.76
Windsor.....	60	125.00		6.00		26.66	3.60		221.26
Total.....	\$144,915	\$113,952.42	\$3,213.44	\$7,241.00	\$4,186.94	\$230.07	\$5,373.29	\$3,234.15	\$282,346.31

TABLE No. VI.—

(For the year ending

CURRENT

TOWNS.	Text-books and supplies.		
	Books.	Supplies.	Total.
Amherst.....	\$107.90	\$108.40	\$216.30
Antrim.....	351.37	144.44	495.81
Bedford.....	92.20	35.79	128.99
Bennington.....	78.23	77.37	155.60
Brookline.....	80.00	20.00	100.00
Deering.....	34.60	15.20	49.98
Francestown.....	40.00	34.70	74.70
Goffstown.....	312.77	138.80	451.57
Greenfield.....	79.32	70.14	149.46
Greenville.....	150.00	56.68	206.68
Hancock.....	92.45	53.22	145.67
Hillsborough.....	388.21	133.76	521.97
Hollis.....	102.22	62.43	164.65
Hudson.....	23.92	84.37	108.29
Lyndeborough.....	100.00	48.65	148.65
Litchfield.....	15.50	26.04	41.54
Manchester.....	3,862.12	1,254.04	5,116.16
Mason.....	44.53	27.88	72.41
Merrimack.....	84.54	111.36	195.90
Milford.....	969.28	388.56	1,357.84
Mont Vernon.....	.....	63.00	63.00
Nashua.....	3,244.66	2,597.65	5,842.31
New Boston.....	100.00	80.09	180.09
New Ipswich.....	101.59	109.22	210.81
Pelham.....	74.19	53.22	127.41
Peterborough.....	270.44	231.54	501.98
Sharon.....	6.99	.....	6.99
Temple.....	40.00	30.00	70.00
Weare.....	292.71	56.53	349.24
Wilton.....	203.28	111.35	314.63
Windsor.....	3.30	1.07	4.37
Total.....	\$11,356.41	\$6,225.59	\$17,582.00

HILLSBOROUGH COUNTY.

August 1, 1901.)

EXPENSES.

Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
\$2,004.00		\$169.00		\$466.66	\$3,655.96
3,227.51		225.00		777.82	4,726.14
2,080.50		128.50	\$5.00	399.91	2,742.90
900.50		41.95	10.15	194.90	1,303.10
696.00		60.00			856.00
802.00		52.00	3.00	113.91	1,020.89
1,152.00		100.00		243.27	1,569.97
4,600.27		167.39	14.20	563.00	5,796.43
1,001.00		65.00	5.00	176.42	1,396.88
1,430.60		60.00		431.15	2,128.43
1,234.30		98.50	5.00	259.01	1,742.48
4,994.25		250.00	10.00	1,173.13	6,949.35
2,066.69		120.00		688.04	3,039.38
1,565.00		125.00		1,168.27	2,966.56
1,017.40		62.00		162.98	1,391.03
605.00		125.00	3.00	27.18	801.72
\$6,126.18	\$2,300.00	370.00	\$50.00	28,524.74	123,287.08
1,126.50		38.00		222.48	1,459.39
2,036.60		145.00		385.37	2,762.87
8,988.25		250.00	10.00	2,552.95	13,159.04
994.00				139.50	1,196.50
45,338.45	1,650.00	100.00	\$800.00	12,267.50	65,998.26
2,261.32		159.50		790.90	3,400.81
1,800.00		100.00	5.00	200.00	2,315.81
1,320.00		120.00		181.21	1,748.62
4,600.87				1,372.28	6,475.13
246.00		8.00		11.00	271.99
540.00		40.00			650.00
2,668.27		147.15	14.00	577.41	3,756.07
4,200.80		125.00		1,017.49	5,657.92
184.50		7.50		5.00	201.37
\$192,608.76	\$3,950.00	\$3,459.49	\$1,734.35	\$55,093.48	\$274,428.08

TABLE No. VI.—*Continued.*—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Amherst.....			\$462.99	\$3,655.96	\$4,118.95	.0048	\$29.21	\$1.53
Antrim.....		\$669.63		4,726.14	5,395.77	.0070	21.68	1.99
Bedford.....			70.50	2,742.90	2,813.40	.0034	16.75	.82
Bennington.....		236.16		1,303.10	1,539.26	.0045	17.85	1.84
Brookline.....			59.00	856.00	915.00	.0032	12.92	1.04
Deering.....			11.02	1,020.89	1,031.91	.0040	11.99	.58
Francestown.....				1,569.97	1,569.97	.0043	17.97	.84
Goffstown.....		217.00	75.00	5,796.43	6,088.43	.0049	18.00	1.36
Greenfield.....				1,396.88	1,396.88	.0043	16.80	.84
Greenville.....			225.46	2,128.43	2,353.89	.0036	17.06	1.50
Hancock.....			55.00	1,742.48	1,797.48	.0040	17.53	1.42
Hillsborough.....			298.06	6,949.35	7,247.41	.0031	21.66	1.56
Hollis.....				3,039.38	3,039.38	.0050	18.08	.98
Hudson.....		2,200.19	76.69	2,966.56	5,243.44	.0075	23.78	.50
Lyndeborough.....				1,391.03	1,391.03	.0046	20.45	1.57
Litchfield.....			25.00	801.72	826.72	.0039	23.44	1.34
Manchester.....				123,287.08	123,287.08	.0036	27.30	1.11
Mason.....				1,459.39	1,459.39	.0022	23.16	1.15
Merrimack.....			87.33	2,762.87	2,850.20	.0040	18.87	1.30
Milford.....		861.32		13,159.04	14,020.36	.0068	29.07	2.23
Mont Vernon.....				1,196.50	1,196.50	.0035	25.45	1.33
Nashua.....			1,986.48	65,998.26	67,984.74	.0040	26.10	2.24
New Boston.....			63.30	3,400.81	3,464.11	.0057	21.33	1.10
New Ipswich.....			500.00	2,315.81	2,815.81	.0035	26.50	2.11
Pelham.....			70.00	1,748.62	1,818.62	.0033	17.09	1.19
Peterborough.....				6,475.13	6,475.13	.0046	19.35	1.50
Sharon.....				271.99	271.99	.0037	14.58	.68
Temple.....			50.00	650.00	700.00	.0070	14.28	1.42
Weare.....	\$325.00		105.00	3,756.07	4,186.07	.0047	18.74	1.69
Wilton.....			95.77	5,657.92	5,753.69	.0058	18.72	1.02
Windsor.....			14.00	201.37	215.37	.0056	29.50	.58
Total.....	\$325.00	\$4,184.30	\$4,330.60	\$274,428.08	\$283,267.98	.0045	\$25.09	\$1.55

TABLE No. I.—MERRIMACK COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any year.	Least number.	Average number of weeks.
Allenstown.....	1	3	2	.....	.....	36	36	36.00
Andover.....	1	9	.....	1	.....	32	26	28.11
Boscawen.....	2	11	4	1	.....	36	22	28.00
Row.....	1	7	.....	2	3	29	29	29.00
Bradford.....	2	7	1	2	.....	30	30	30.00
Canterbury.....	1	8	.....	4	.....	30	9	22.50
Chichester.....	1	6	.....	2	.....	29	29	29.00
Concord.....	3	67	55	4	1	36	27	34.00
Danbury.....	1	8	.....	4	.....	21	21	21.00
Dunbarton.....	1	4	.....	1	.....	30	29	29.75
Epsom.....	1	6	.....	2	.....	31	29	29.50
Franklin.....	1	21	14	5	1	36	14	33.33
Henniker.....	1	8	2	4	.....	35	29	30.50
Hill.....	1	5	2	1	.....	27	17	25.00
Hooksett.....	1	10	.....	3	.....	33	33	33.00
Hopkinton.....	1	15	.....	9	2	31	11	27.93
Loudon.....	1	10	.....	4	1	30	30	30.00
Newbury.....	1	5	.....	1	2	24	20	22.40
New London.....	1	6	.....	1	1	30	20	28.33
Northfield.....	1	7	.....	2	1	26	21	24.00
Pembroke.....	1	10	4	9	1	34	*32	32.00
Pittsfield.....	1	11	6	3	1	33	24	31.36
Salisbury.....	1	6	.....	1	1	27	22	25.50
Sutton.....	1	9	2	4	1	25	15	22.33
Warner.....	1	15	2	7	4	27	12	23.26
Webster.....	1	7	.....	5	1	24	24	24.00
Wilnot.....	1	6	.....	3	1	27	28	21.83
Total.....	31	287	94	85	22	.....	.....	27.82

* One school maintains 11 weeks. All pupils had 32 weeks at least.

TABLE No. II.—MERRIMACK COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Allenstown.....	2	.....	.....	3	\$9,000.00	\$2,000.00
Andover.....	10	.....	.....	11	4,500.00	300 00
Boscawen.....	7	.....	.....	11	8,000.00	400.00
Bow.....	8	.....	.....	8	4,000.00	400.00
Bradford.....	9	2	.....	10	2,300.00	200.00
Canterbury.....	9	.....	.....	9	4,400.00	50.00
Chichester.....	6	.....	.....	6	1,500.00	50.00
Concord.....	30	.....	1	84	365,500.00	25,500 00
Danbury.....	8	.....	.....	8	4,000.00	75.00
Dunbarton.....	9	2	.....	9	2,500.00	165.00
Epsom.....	7	.....	.....	7	5,700.00	.....
Franklin.....	11	.....	.....	22	75,000.00	16,000.00
Henniker.....	10	1	.....	15	15,150.00	500.00
Hill.....	4	.....	.....	5	1,800.00	250 00
Hooksett.....	8	.....	.....	10	6,800.00	200.00
Hopkinton.....	17	2	.....	17	8,000.00	80.00
Loudon.....	10	.....	.....	11	4,500.00	300 00
Newbury.....	9	3	.....	9	3,000.00	150.00
New London.....	7	.....	.....	7	3,500.00	125 00
Northfield.....	8	.....	.....	8	3,200.00	250.00
Pembroke.....	7	.....	1	10	8,500.00	500.00
Pittsfield.....	9	.....	.....	13	21,000.00	200.00
Salisbury.....	7	.....	.....	7	3,000.00	50 00
Sutton.....	9	.....	.....	10	3,000.00	300.00
Warner.....	14	.....	.....	15	11,600.00	1,000 00
Webster.....	7	.....	.....	7	3,000.00	400.00
Wilmot.....	8	1	.....	8	3,000.00	100.00
Total.....	150	11	2	320	\$584,850.00	\$49,545.00

TABLE No. III.—MERRIMACK COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.								
Allentown...	173	176	43	31	....	73	1	49	43	85	178	4
Andover....	113	98	141	110	19	218	14	250	248	99	....	....
Boscawen....	142	144	168	160	22	299	7	260	206	79	....	....
Bow	45	57	43	54	14	78	5	74	61	82	....	2
Bradford....	59	58	76	64	12	116	12	140	127	78	....	....
Canterbury ..	81	66	80	72	15	134	3	110	94	87	....	8
Chichester...	45	60	49	62	18	90	3	90	75	83	....	....
Concord	1,657	1,580	1,677	1,602	415	2,612	252	2,912	2,650	91	356	79
Danbury	78	69	77	58	12	116	7	119	109	91	....	....
Dunbarton...	39	40	43	50	7	82	4	68	59	86	....	....
Epsom	46	41	72	63	19	112	4	101	92	91	....	....
Franklin.....	539	549	363	422	54	720	11	686	657	95	313	79
Henniker.....	102	88	138	122	17	224	19	213	190	89	....	....
Hill	50	41	52	41	11	81	1	67	57	85	....	....
Hooksett.....	187	183	191	173	41	315	8	258	221	85	....	....
Hopkinton...	121	115	128	124	27	218	7	227	175	77	....	....
Loudon.....	80	70	89	71	13	139	8	127	104	81	....	....
Newbury	40	25	36	27	3	57	3	51	45	86	....	2
New London ..	44	47	60	55	14	100	1	88	77	92	....	....
Northfield...	53	38	54	43	11	77	9	75	68	88	....	....
Pembroke....	268	358	134	129	35	226	2	195	167	85	245	19
Pittsfield....	186	189	211	243	13	393	48	424	353	83	....	....
Salisbury....	40	45	48	56	2	97	5	79	68	86	....	....
Sutton	86	57	80	55	9	118	8	118	100	84	....	....
Warner	96	69	127	125	16	211	25	3	181	86	....	2
Webster	33	33	44	45	5	79	5	66	49	74	....	....
Wilmot	49	47	54	55	5	102	2	109	87	79	....	....
Total	3,452	4,343	4,278	4,112	829	7,087	474	7,159	6,363	89	1,092	195

TABLE No. IV.—MERRIMACK COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Allenstown.....			3	\$40.00				3	
Andover.....			18	28.90		4	2		
Boscawen.....			15	30.27	2	4		1	
Bow.....	2	\$24.00	10	26.00	4	3			
Bradford.....			11	29.83	1	6			
Canterbury.....			11	22.50	3	6			1
Chichester.....	1	28.00	8	25.25	1	2			
Concord.....	1	111.11	71	45.71	4	26	16	29	8
Danbury.....			8	21.75	3	3			
Dunbarton.....			4	29.00			2	2	2
Epsom.....	1	26.66	9	28.80	2	4	1	2	
Franklin.....	1	60.00	20	40.00	1		10	5	4
Henniker.....			14	28.75		4	3	1	4
Hill.....	1	32.00	6	28.00	1	4	1	1	1
Hooksett.....			10	32.00	1		1	1	
Hopkinton.....	1	32.00	19	25.15	5	3	3	1	
Loudon.....	1	32.00	15	23.80		1	1	1	
Newbury.....			10	26.46	2	5	3		
New London.....			9	27.55		3	1		
Northfield.....			11	23.57	2	3	1		
Pembroke.....			10	31.33	1	3	1	5	
Pittsfield.....	1	53.55	10	28.80	3	1	2		3
Salisbury.....	2	25.33	11	23.60	5	3	1	1	
Sutton.....	1	28.00	8	22.57		6	4	1	
Warner.....			15	24.66		5		1	1
Webster.....			12	24.00	1		2		
Wilmot.....			11	21.66	1	8			
Total.....	13	\$41.15	359	\$28.14	43	87	55	55	24

TABLE No. V.—MERRIMACK COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Allenstown	\$1,295.00	\$7.00		\$42.50			\$49.78		\$1,394.28
Andover	1,115.00	1,000.00	\$208.19	133.00		\$600.68	175.40	\$23.70	3,255.97
Boscawen	1,405.00	1,635.00	220.00	121.00	\$75.00		60.00		3,516.00
Bow	970.00	230.00		48.00			181.80		1,429.80
Bradford	1,130.00	375.00		68.50			151.20	69.10	1,793.80
Canterbury	1,035.00	328.66	60.00	59.50			90.49		1,633.65
Chichester	945.00	465.00	97.49	57.00			10.90	17.49	1,592.88
Concord	36,135.00	20,281.00		1,571.00			1,155.16	2,657.17	61,799.33
Danbury	635.00	300.00		68.50			108.00	4.80	1,116.30
Dunbarton	885.00	200.00	156.09	39.00			76.00		1,356.09
Epsom	855.00	345.00	104.02	61.00			63.60		1,428.62
Franklin	7,685.00	6,700.00	1,200.00	385.00				30.00	16,000.00
Henniker	1,870.00	1,300.00		134.50			199.85	446.95	3,951.30
Hill	535.00	500.00	187.50	44.50			70.40		1,337.40
Hooksett	1,745.00	1,355.00		171.00					3,271.00
Hopkinton	2,360.00	500.00		132.50			230.61	3.06	3,226.11
Loudon	1,505.00	300.00	319.40	92.50	94.00		44.85	55.00	2,410.75
Newbury	680.00	25.00	57.50	35.00	35.00		48.77	4.80	886.07
New London	940.00	350.00	112.06	52.50			117.60	133.47	1,705.63
Northfield	576.35	400.00	100.00	56.00		102.39	48.54		1,283.28
Pembroke	2,845.00	2,500.00	250.00	133.00			220.27	17.80	5,966.07
Pittsfield	2,730.00	3,270.00		216.50			85.00	195.25	6,496.75
Salisbury	640.00	300.00	52.06	67.50			75.35		1,134.91
Sutton	780.00	700.00	100.00	62.50	97.50		97.86	18.40	1,856.26
Warner	1,930.00	815.00	516.00	116.00	12.00		186.90	380.48	3,956.38
Webster	855.00	100.00		44.50			57.26	12.50	1,069.26
Wilmot	610.00			47.00			83.60	6.50	747.10
Total	\$74,751.35	\$44,281.66	\$3,740.31	\$4,059.50	\$313.50	\$703.07	\$3,689.19	\$4,076.41	\$135,614.99

TABLE No. VI.—MERRIMACK COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Allenstown	\$94.23	\$17.92	\$112.15	\$1,180.00	.....	\$97.00	\$15.00	\$359.41	\$1,763.56
Andover.....	166.12	42.07	208.19	2,216.35	.....	60.00	18.00	283.30	2,785.84
Boscawen.....	134.16	73.52	207.68	2,235.00	.....	90.00	32.00	155.00	2,719.68
Bow	52.92	35.27	88.19	1,268.00	.....	75.00	.....	97.39	1,528.58
Bradford	97.59	36.30	133.89	1,405.00	.....	42.00	4.00	11.80	1,506.69
Canterbury.....	40.00	20.00	60.00	1,012.50	.....	75.00	10.00	370.00	1,527.50
Chichester.....	80.49	17.00	97.49	1,122.00	.....	65.00	.....	188.70	1,473.19
Concord	2,536.36	651.93	3,188.29	38,664.05	\$2,500.00	500.00	427.00	17,045.00	62,324.34
Danbury.....	40.61	18.01	58.62	920.50	.....	60.00	1.00	6.00	1,046.12
Dunbarton	43.92	12.17	56.09	806.80	.....	52.75	.....	300.37	1,276.01
Epsom	104.02	25.30	129.32	1,235.00	.....	60.00	.....	60.42	1,484.74
Franklin.....	500.00	451.92	951.92	1,219.91	.....	300.00	25.00	2,709.56	5,206.39
Henniker	328.62	164.30	492.92	3,028.00	.....	98.10	.....	518.15	4,137.17
Hill.....	96.17	91.33	187.50	891.00	.....	55.00	.....	65.00	1,198.50
Hooksett	239.62	88.87	328.49	2,508.00	.....	75.00	30.00	29.00	2,970.49
Hopkinton	224.68	53.75	278.43	2,711.40	.....	193.08	22.96	559.05	3,764.92
London.....	298.05	21.35	319.40	1,835.00	.....	90.00	10.00	184.39	2,438.79
Newbury	25.00	22.57	47.57	731.00	.....	31.50	3.00	10.05	823.12
New London.....	55.19	58.05	113.24	1,294.50	.....	75.00	6.00	128.23	1,616.97
Northfield	50.00	30.06	80.06	936.50	.....	50.00	7.00	27.80	1,101.36
Pembroke	91.39	24.84	116.23	2,402.00	.....	139.00	.....	442.90	3,100.13
Pittsfield	400.22	123.49	523.71	4,476.00	.....	125.00	20.00	1,251.05	6,395.76
Salisbury.....	43.63	8.43	52.06	918.50	.....	80.25	6.00	86.48	1,143.29
Sutton.....	104.58	7.91	112.49	1,309.55	.....	78.00	4.50	230.15	1,734.69
Warner.....	166.87	116.87	283.74	2,078.50	.....	120.00	6.00	143.78	2,632.02
Webster.....	17.46	11.22	28.68	1,008.00	.....	69.00	.....	85.34	1,191.02
Wilnot.....	47.76	23.79	71.55	724.00	.....	38.00	.....	48.87	882.42
Total	\$6,079.66	\$2,248.24	\$8,327.90	\$80,197.06	\$2,500.00	\$2,793.68	\$647.46	\$25,397.19	\$119,863.29

TABLE No. VI.—*Continued.*—MERRIMACK COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Allenstown				\$1,763.56	\$1,763.56	.0025	\$35.99	\$2.26
Andover			\$59.20	2,785.84	2,845.04	.0063	11.57	.83
Boscawen		\$65.00	52.50	2,719.68	2,837.18	.0053	10.92	.81
Bow				1,528.58	1,528.58	.0046	20.65	1.19
Bradford			1.50	1,596.69	1,598.19	.0026	11.58	.95
Canterbury				1,527.50	1,527.50	.0035	12.56	.55
Chichester			113.96	1,473.19	1,587.15	.0055	17.64	1.08
Concord	\$30,000.00	15,900.00	2,800.40	62,324.34	111,024.74	.0071	27.82	1.00
Danbury			26.00	1,046.12	1,072.12	.0043	9.01	.49
Dunbarton				1,276.01	1,276.01	.0044	20.24	2.27
Epsom			113.44	1,484.74	1,598.18	.0046	15.82	1.28
Franklin	1,683.11		349.21	5,206.39	7,238.71	.0070	8.08	1.41
Henniker			250.00	4,137.17	4,387.17	.0062	20.59	2.31
Hill	300.00			1,198.50	1,498.50	.0071	17.89	2.79
Hooksett			200.00	2,970.49	3,170.49	.0047	12.28	1.27
Hopkinton			154.03	3,764.92	3,918.95	.0037	17.26	1.22
London			100.00	2,438.79	2,538.79	.0035	19.91	2.48
Newbury			18.07	823.12	841.19	.0030	15.04	1.10
New London			97.84	1,616.97	1,714.81	.0044	19.70	1.34
Northfield			58.19	1,101.36	1,159.55	.0015	14.86	1.02
Pembroke	953.35		149.19	3,100.13	4,202.67	.0035	21.54	.59
Pittsfield			100.08	6,395.76	6,495.84	.0052	15.24	1.23
Salisbury			19.48	1,143.29	1,162.77	.0045	14.61	.65
Sutton			552.48	1,734.69	2,287.17	.0072	13.63	.95
Warner			196.36	2,632.02	2,828.38	.0044	18.39	1.84
Webster			1.50	1,191.02	1,192.52	.0038	18.06	.43
Wilmot			168.17	882.42	1,050.59	.0045	12.07	.82
Total	\$32,936.46	\$15,965.00	\$5,581.60	\$119,803.29	\$174,346.35	.0046	\$24.49	\$1.16

TABLE No. I.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Atkinson	1	5	.....	3	.....	31	24	29.60
Auburn	1	7	.....	4	.....	31	12	25.71
Brentwood	1	4	.....	1	.....	27	25	26.25
Candia	1	10	.....	1	.....	31	11	26.00
Chester	1	7	2	1	.....	31	29	29.57
Danville	1	4	2	.....	.....	30	29	29.75
Deerfield	1	11	.....	3	.....	34	10	27.63
Derry	3	14	7	.....	.....	38	36	37.50
East Kingston	1	3	.....	1	.....	34	22	30.60
Epping	1	10	4	3	1	31	23	27.70
Exeter	1	15	13	.....	.....	36	36	36.00
Fremont	1	5	.....	.....	.....	27	25	26.00
Greenland	1	3	.....	.....	.....	36	36	36.00
Hampstead	1	6	.....	6	.....	37	34	35.90
Hampton	1	4	4	1	.....	36	36	36.00
Hampton Falls	1	3	.....	.....	.....	36	32	34.50
Kensington	1	3	.....	.....	.....	33	33	33.00
Kingston	1	5	.....	.....	.....	32	30	31.20
Londonderry	1	10	.....	4	.....	33	24	28.20
Newcastle	1	2	.....	.....	.....	36	36	36.00
Newfields	1	4	3	1	.....	34	12	28.50
Newington	1	2	2	.....	.....	37	37	37.00
Newmarket	1	11	9	.....	.....	36	36	36.00
Newton	1	4	.....	.....	.....	37	37	37.00
North Hampton	1	4	4	.....	.....	37	36	36.50
Northwood	1	8	4	1	.....	28	22	25.00
Nottingham	1	10	.....	8	2	23	23	23.00
Plaistow	1	6	.....	.....	.....	37	36	36.16
Portsmouth	1	36	33	.....	.....	37	10	36.17
Raymond	1	9	3	2	1	36	12	28.77
Rye	1	4	.....	.....	.....	35	35	35.00
Salem	1	10	.....	1	.....	36	33	34.10
Sandown	1	3	.....	.....	.....	24	24	24.00
Seabrook	1	8	.....	.....	.....	37	36	36.50
South Hampton	1	4	.....	.....	1	29	28	28.50
Stratham	1	4	.....	1	.....	34	34	34.00
Windham	1	6	.....	3	1	30	10	22.50
Total	39	264	90	45	6	.....	.....	31.40

TABLE No. II.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Atkinson.....	6	.....	.....	7	\$3,000.00	\$50.00
Auburn.....	8	.....	.....	8	2,600.00	150.00
Brentwood.....	4	.....	.....	4	2,500.00	70.00
Candia.....	11	.....	.....	11	3,300.00	100.00
Chester.....	8	1	.....	9	3,000.00	150.00
Danville.....	3	.....	.....	4	2,200.00	200.00
Deerfield.....	13	.....	.....	13	4,500.00	100.00
Derry.....	11	.....	.....	15	22,000.00	200.00
East Kingston....	4	.....	.....	4	4,200.00	200.00
Epping.....	9	.....	.....	11	9,500.00	.....
Exeter.....	14	.....	.....	20	26,000.00	1,000.00
Fremont.....	5	.....	.....	5	3,500.00	150.00
Greenland.....	4	.....	.....	4	2,000.00	75.00
Hampstead.....	7	.....	.....	7	7,900.00	200.00
Hampton.....	4	.....	.....	6	10,000.00	300.00
Hampton Falls....	4	.....	.....	4	5,000.00	500.00
Kensington.....	3	.....	.....	3	1,450.00	50.00
Kingston.....	5	.....	.....	5	3,500.00	.....
Londonderry.....	9	.....	.....	9	6,800.00	400.00
Newcastle.....	2	.....	.....	2	2,000.00	200.00
Newfields.....	3	.....	.....	4	4,000.00	200.00
Newington.....	1	.....	.....	2	1,900.00	50.00
Newmarket.....	8	.....	.....	14	5,000.00	500.00
Newton.....	4	.....	.....	5	2,625.00	115.50
North Hampton....	2	.....	.....	4	6,500.00	350.00
Northwood.....	6	.....	.....	8	3,900.00	150.00
Nottingham.....	11	.....	.....	11	4,000.00	100.00
Plaistow.....	5	.....	.....	6	6,000.00	250.00
Portsmouth.....	11	.....	.....	47	100,000.00	1,500.00
Raymond.....	9	.....	.....	11	4,700.00	.....
Rye.....	4	.....	.....	4	12,000.00	500.00
Salem.....	9	.....	.....	11	13,200.00	500.00
Sandown.....	3	.....	.....	4	1,500.00	100.00
Seabrook.....	6	.....	.....	8	6,000.00	300.00
South Hampton....	4	.....	.....	4	4,000.00	.....
Stratham.....	4	.....	.....	4	5,600.00	100.00
Windham.....	7	.....	.....	7	5,000.00	150.00
Total.....	231	1	.....	305	\$210,870.00	\$8,960.50

TABLE No. III.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.								
Atkinson.....	36	37	34	40	10	64	...	58	53	90	...	6
Auburn.....	48	56	48	60	15	91	2	90	83	93	...	...
Brentwood.....	46	48	56	50	5	101	...	83	74	89	...	...
Candia.....	69	76	91	105	24	159	13	155	135	75	...	...
Chester.....	54	74	62	74	16	116	4	111	103	89	...	...
Danville.....	53	65	56	66	8	114	...	103	95	92	...	2
Deerfield.....	102	123	104	122	14	203	9	177	147	77	...	...
Derry.....	319	270	297	264	36	485	40	413	356	86	...	...
East Kingston..	31	25	20	25	4	40	1	55	50	81	...	8
Epping.....	138	121	146	140	20	261	5	215	183	85	...	3
Exeter.....	486	445	532	300	126	690	16	721	647	89	...	187
Fremont.....	76	85	64	77	18	122	1	97	88	96	...	...
Greenland.....	52	48	52	44	7	82	7	88	73	73	...	...
Hampstead.....	68	77	67	68	6	127	2	116	95	81	...	...
Hampton.....	87	98	102	107	11	172	36	182	166	91	...	...
Hampton Falls.	38	36	38	37	10	64	1	61	53	85	...	...
Kensington.....	33	28	33	28	8	53	...	55	47	83	...	...
Kingston.....	89	78	89	79	12	156	...	149	129	86	...	...
Londonderry...	127	122	146	135	38	242	1	211	182	86	...	...
Newcastle.....	24	21	24	21	2	42	1	41	35	88	...	...
Newfields.....	61	45	62	47	9	97	3	101	85	84	...	...
Newington.....	37	25	35	20	7	48	...	44	36	83	2	...
Newmarket.....	360	407	252	250	46	442	14	413	371	89	160	...
Newton.....	86	66	87	72	11	145	3	125	111	75	...	1
North Hampton	53	50	54	45	10	86	3	79	68	82	...	...
Northwood.....	140	155	133	144	37	235	5	213	173	81	2	24
Nottingham.....	49	45	55	60	15	94	6	100	87	87	...	...
Plaistow.....	108	122	90	108	33	165	...	152	129	84	4	11
Portsmouth.....	794	901	731	840	143	1,285	143	1,479	1,322	89	335	...
Raymond.....	83	67	85	73	14	143	1	168	148	86	...	...
Rye.....	68	70	75	79	11	138	5	132	117	88	...	5
Salem.....	167	126	149	142	13	272	6	252	223	89	...	3
Sandown.....	37	35	34	38	5	67	...	57	53	87	...	...
Seabrook.....	139	153	148	150	26	264	8	220	173	78	...	...
South Hampton	22	22	26	30	8	46	2	33	31	95	...	...
Stratham.....	72	60	68	47	7	108	...	106	84	86	...	10
Windham.....	51	53	52	51	16	85	2	83	72	86	...	8
Total.....	4,293	4,332	4,207	4,038	801	7,104	340	6,938	6,077	87	503	268

TABLE No. IV.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Atkinson.....			7	\$28.80	...	1	4	1	1
Auburn.....			7	24.00		3			
Brentwood.....			5	32.50	1		1	1	
Candia.....	1	\$22.00	13	25.60	3	1	1		1
Chester.....			7	28.19	1	1			
Danville.....	1	40.00	4	29.00	3	1			
Deerfield.....	1	28.00	10	26.20	1	3	1	2	
Derry.....			14	34.60			5		
East Kingston...			4	26.75					4
Epping.....			14	29.00	3			1	
Exeter.....	1	111.11	16	39.75			10	1	2
Fremont.....			5	28.00			1		
Greenland.....			3	30.00			1	1	1
Hampstead.....			6	32.00		4	1	2	
Hampton.....			4	35.00	1	1	1	1	
Hampton Falls...			3	30.00	2				
Kensington.....	1	26.00	2	26.00					
Kingston.....	1	30.00	4	30.00				1	
Londonderry....	3	32.00	7	31.00	1	6		1	1
Newcastle.....			2	30.00		1			
Newfields.....			4	36.00	1		1	1	
Newington.....			2	30.00			1	1	
Newmarket.....			11	36.00	2	1	3	2	1
Newton.....			4	30.00					1
North Hampton.		70.00	3	38.00			3		2
Northwood.....	1	40.00	9	27.14	1				
Nottingham.....			10	24.12					
Plaistow.....			6	30.00	1				
Portsmouth.....	4	88.88	39	43.65	1		5	21	5
Raymond.....	1	36.00	8	29.33	1				1
Rye.....			6	42.00			2	2	
Salem.....			10	34.40		3	1		
Sandown.....			3	28.00					
Seabrook.....	3	31.33	5	27.60	1	1	1		
South Hampton.			4	26.00			1		
Stratham.....			4	36.00			2	2	1
Windham.....			6	28.16	1		1	1	
Total.....	19	\$46.28	271	\$30.88	26	33	46	42	22

TABLE No. V.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Atkinson	\$645.00	\$400.00		\$29.50			\$86.00	\$8.00	\$1,168.50
Auburn	700.00	250.00	\$49.55	52.00			73.18		1,214.73
Brentwood	640.00	100.00		59.50			65.63		865.13
Candia	1,070.00	400.00	96.18	109.00			133.38	198.61	2,007.17
Chester	905.00	400.00	126.67	72.50			169.12	10.50	1,683.79
Danville	385.00	350.00		60.50		\$236.89			1,032.39
Deerfield	1,215.00	390.00		109.00	\$334.00		192.63	16.25	2,256.88
Derry	2,985.00	3,050.00	629.54	245.50	120.00		388.52	43.45	7,462.01
East Kingston..	455.00		15.00	33.00	221.70		82.80		807.50
Epping	1,550.00	1,000.00		142.50			185.05	59.12	2,936.67
Exeter	7,325.00	3,151.50	550.00	407.50				248.37	11,682.37
Fremont	545.00	500.00		74.00	50.00	230.79			1,399.79
Greenland	940.00	600.00	146.00	49.00			54.00		1,789.00
Hampstead	890.00	1,300.00	128.87	95.50	39.51	289.57	92.40	189.19	3,025.04
Hampton	1,320.00	1,078.00	200.00	84.00			10.20		2,692.20
Hampton Falls.	620.00	230.00	50.00	40.00			84.02		1,024.02
Kensington	510.00	100.00		37.50			93.49		740.99
Kingston	655.00	400.00		25.00	75.60	246.03	97.90		1,569.53
Londonderry...	1,460.00	1,000.00		136.00			208.60		2,804.60
Newcastle	560.00	333.86		22.00					915.86
Newfields	710.00	335.00	92.75	64.50			48.32		1,250.57
Newington	565.00		150.00	23.50			24.20		762.70
Newmarket	2,660.00	2,350.00	500.00	210.00		200.00	128.60	340.00	6,388.60
Newton	665.00	500.00	89.68	84.00		208.95	185.40	6.65	1,739.68
North Hampton	1,355.00	731.00	96.48	59.00					2,241.48
Northwood	1,245.00	500.00		125.00	81.00		132.70		2,083.70
Nottingham	695.00	500.00		56.00	453.51		76.60	5.00	1,786.11
Plaistow	635.00	800.00	150.00	97.00		220.56	120.05	3.00	2,025.61
Portsmouth	27,925.00	2,888.78	2,511.25	733.50	70.00		816.50	1,179.89	36,124.92
Raymond	1,015.00	700.00		94.00		236.56	148.20		2,193.76
Rye	1,955.00	295.00		81.50			138.00	23.00	2,492.50
Salem	1,315.00	2,300.00		167.00	36.90	667.85	298.15		4,784.90
Sandown	325.00	150.00		48.00		94.46	47.20		664.66
Seabrook	560.00	1,240.00	250.00	159.50		613.50	110.00	128.55	3,061.55
South Hampton	365.00	135.00	50.00	29.50	250.00		58.60		888.10
Stratham	1,060.00	400.00		72.00			55.80		1,587.80
Windham	705.00	300.00	50.00	45.00	94.82		119.43	24.85	1,339.10
Total	\$69,220.00	\$29,158.14	\$5,931.97	\$4,102.50	\$1,827.04	\$3,245.16	\$4,524.67	\$2,484.43	\$120,493.91

TABLE No. VI.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Atkinson	\$70.80	\$24.90	\$95.70	\$1,048.00	.....	\$30.00	.....	\$62.50	\$1,236.20
Auburn	25.63	23.92	49.55	1,068.00	.....	90.00	\$5.00	77.64	1,290.19
Brentwood	45.10	10.56	55.66	812.50	.....	36.00	5.00	56.85	966.01
Candia	44.17	52.13	96.30	1,814.50	.....	95.19	5.00	72.45	2,083.44
Chester	100.78	25.89	126.67	1,457.00	.....	100.00	.....	155.19	1,838.86
Danville .....	.....	96.17	96.17	894.60	.....	30.00	5.00	102.37	1,128.14
Deerfield	68.36	15.92	84.28	1,763.00	.....	67.00	.....	130.64	2,044.92
Derry	384.79	244.75	629.54	4,151.80	.....	200.00	37.50	1,222.40	6,241.24
East Kingston	13.34	1.66	15.00	761.30	.....	40.00	5.00	101.10	922.40
Epping	167.41	88.25	255.66	2,602.50	.....	148.00	10.00	290.47	3,306.63
Exeter	600.86	196.37	806.23	8,693.00	.....	225.00	.....	2,405.21	12,129.44
Fremont	19.44	1.07	21.11	938.50	\$250.00	30.00	5.00	15.29	1,259.90
Greenland	78.63	67.42	146.05	1,324.00	.....	45.00	.....	177.95	1,693.00
Hampstead	128.87	152.64	281.51	2,079.00	250.00	45.00	4.50	122.49	2,782.50
Hampton	223.18	111.29	334.47	1,805.00	.....	30.00	.....	456.24	2,625.71
Hampton Falls	27.36	15.89	43.25	759.00	.....	40.00	2.00	202.25	1,046.50
Kensington	20.40	18.00	38.40	643.50	.....	25.00	.....	62.50	769.40
Kingston	90.83	36.98	127.81	1,169.50	.....	55.00	.....	63.33	1,415.64
Londonderry	175.13	113.00	288.13	2,154.00	.....	92.00	5.00	311.10	2,850.23
Newcastle	35.44	10.61	46.05	570.00	.....	15.00	10.00	202.95	844.00
Newfields	70.92	21.83	92.75	952.00	.....	35.00	.....	199.40	1,279.15
Newington	22.49	34.36	56.85	638.00	.....	16.25	2.00	31.05	744.15
Newmarket	347.13	183.88	531.01	4,042.50	299.97	.....	*536.10	359.40	5,768.98
Newton	89.68	52.83	142.51	1,572.50	.....	61.31	.....	182.02	1,958.34
North Hampton	52.76	43.72	96.48	1,075.13	.....	55.00	.....	328.92	2,155.53
Northwood	290.48	13.80	304.28	1,475.75	.....	75.00	6.75	139.60	2,001.08
Nottingham	87.46	45.08	132.54	1,212.00	.....	52.00	.....	87.63	1,484.17
Plaistow	100.95	50.02	150.97	1,626.00	.....	60.00	.....	208.28	2,045.25
Portsmouth	1,122.12	1,389.13	2,511.25	25,838.63	1,800.00	.....	.....	5,975.04	36,124.92
Raymond	125.45	77.86	203.31	2,010.00	.....	75.37	.....	147.25	2,435.93
Rye	103.16	31.72	134.88	1,604.90	.....	70.00	.....	500.62	2,310.40
Salem	194.71	129.47	324.18	2,834.00	556.80	102.00	13.75	762.06	4,592.79
Sandown	50.00	25.00	75.00	592.00	.....	20.00	.....	15.00	702.00
Seabrook	240.47	10.00	250.47	2,120.90	.....	70.00	25.00	203.20	2,669.57
South Hampton	22.08	8.18	30.26	725.00	.....	25.00	.....	50.78	831.04
Stratham	30.00	66.33	96.33	1,231.70	.....	58.00	.....	.....	1,386.03
Windham	12.60	17.56	30.16	1,034.50	.....	80.00	.....	349.46	1,494.12
Total	\$5,291.98	\$3,508.79	\$8,800.77	\$87,694.21	\$3,156.77	\$2,293.12	\$682.60	\$15,830.33	\$118,457.80

* Janitor and truant officer combined.

TABLE No. VI.—*Continued.*—ROCKINGHAM COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Atkinson.....				\$1,236.20	\$1,236.20	.0041	\$21.04	\$1.62
Auburn.....			\$102.33	1,290.19	1,392.52	.0030	15.47	.55
Brentwood.....			99.84	966.01	1,065.85	.0037	12.84	.67
Candia.....	\$75.00		371.50	2,083.44	2,529.94	.0036	15.21	.60
Chester.....				1,838.86	1,838.86	.0047	16.56	1.14
Danville.....			50.60	1,128.14	1,178.74	.0038	11.72	.92
Deerfield.....				2,044.92	2,044.92	.0047	11.56	.49
Derry.....			460.45	6,241.24	6,701.69	.0051	16.23	1.52
East Kingston..	\$100.00			922.40	1,022.40	.0039	20.04	.26
Epping.....				3,306.63	3,306.63	.0049	15.38	1.19
Exeter.....				12,129.44	12,129.44	.0038	16.80	1.12
Fremont.....				1,259.90	1,259.90	.0032	12.98	.21
Greenland.....			57.94	1,693.00	1,750.94	.0046	18.53	1.65
Hampstead.....		47.00	595.08	2,782.50	3,424.58	.0089	29.51	2.42
Hampton.....			198.17	2,625.71	2,823.88	.0040	15.52	1.84
Hampton Falls.			15.00	1,046.50	1,061.50	.0037	17.15	.70
Kensington.....			10.00	769.40	779.40	.0031	9.53	.46
Kingston.....				1,415.64	1,415.64	.0036	9.48	.85
Londonderry...			181.60	2,350.23	3,031.83	.0026	13.90	1.36
Newcastle.....				844.00	844.00	.0028	21.02	1.12
Newfields.....			40.62	1,270.15	1,310.77	.0054	13.06	.87
Newington.....	75.00			744.15	819.15	.0033	16.91	1.29
Newmarket.....		48.00	200.00	5,768.98	6,016.98	.0040	14.67	1.31
Newton.....				1,958.34	1,958.34	.0052	13.23	.96
North Hampton			5.00	2,155.53	2,160.53	.0033	25.79	1.08
Northwood.....			40.00	2,001.08	2,041.08	.0037	9.39	1.05
Nottingham.....	89.00		150.00	1,484.17	1,723.17	.0054	16.34	1.33
Plaistow.....		64.07	70.00	2,045.25	2,179.32	.0045	14.31	.99
Portsmouth...			5,948.13	36,124.92	42,073.05	.0049	28.45	1.70
Raymond.....				2,435.93	2,435.93	.0050	14.48	1.20
Rye.....			250.00	2,310.40	2,560.40	.0044	18.69	1.02
Salem.....			181.25	4,592.79	4,774.04	.0067	18.94	1.28
Sandown.....			30.00	702.00	732.00	.0036	12.63	1.31
Seabrook.....			164.93	2,669.57	2,834.50	.0090	12.88	1.14
South Hampton				831.04	831.04	.0046	19.15	.91
Stratham.....				1,386.03	1,386.03	.0047	13.07	.91
Windham.....				1,494.12	1,494.12	.....	.....	.....
Total.....	\$239.00	\$259.07	\$9,222.44	\$118,457.80	\$128,178.31	.0044	\$18.41	\$1.27

TABLE No. 1.—STRAFFORD COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Barrington.....	1	10	.....	.....	1	26	25	25.80
Dover.....	1	34	30	.....	.....	37	37	37.00
Durham.....	1	5	2	1	1	36	12*	36.00
Farmington.....	2	14	7	2	2	37	28	31.00
Lee.....	1	3	.....	1	.....	33	32	32.66
Madbury.....	1	3	.....	2	1	30	30	30.00
Middleton.....	1	4	.....	1	.....	22	19	20.50
Milton.....	1	13	6	3	2	30	28	29.68
New Durham.....	1	7	.....	4	.....	26	22	25.42
Rochester.....	1	27	23	1	.....	36	36	36.00
Rollinsford.....	2	7	4	.....	.....	36	36	36.00
Somersworth.....	1	28	25	.....	.....	40	36	38.00
Strafford.....	1	12	.....	2	1	21	13*	21.25
Total.....	15	167	97	17	8	.....	.....	30.77

* Discontinued.

TABLE No. II.—STRAFFORD COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture and sites.	Estimated value of apparatus.
Barrington	13	1	.....	13	\$6,000 00	\$200.00
Dover	19	.....	.....	41	145,000.00	1,500.00
Durham	5	1	.....	7	7,500.00	500.00
Farmington	16	3	.....	20	30,500.00	950.00
Lee	3	.....	.....	3	3,000.00	100.00
Madbury	3	.....	.....	3	2,200.00	10.00
Middleton	4	.....	.....	4	1,000.00	50.00
Milton	10	.....	.....	14	19,000.00	150.00
New Durham	8	.....	.....	8	3,500.00	100.00
Rochester	14	1	.....	40	90,000.00	800.00
Rollinsford	5	.....	.....	9	8,000.00	250.00
Somersworth	9	.....	.....	42	150,000.00	3,500.00
Strafford	14	.....	.....	14	4,550.00	150.00
Total	123	6	.....	218	\$470,250 00	\$8,260.00

TABLE No. III.—STRAFFORD COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.		Over sixteen years.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.	Under six years.	Between six and sixteen.						
Barrington.....	98	112	103	134	18	209	10	185	159	85	...	...
Dover.....	1,138	1,105	879	816	146	1,437	112	1,487	1,365	91	700	...
Durham.....	97	60	80	55	16	118	1	123	105	85	...	...
Farmington....	180	187	200	219	30	350	39	362	324	89	...	...
Lee.....	32	31	31	30	8	52	1	44	36	81	...	...
Madbury.....	25	22	21	22	6	34	3	36	33	92	...	7
Middleton.....	31	25	31	25	6	47	3	48	42	88	...	3
Milton.....	135	135	152	144	38	248	10	231	198	87	...	...
New Durham..	54	45	55	45	5	97	1	99	84	84	...	...
Rochester.....	649	698	622	661	108	1,079	96	1,040	928	89	250	10
Rollinsford....	159	185	145	176	40	271	10	246	211	85	...	1
Somersworth ..	881	846	572	551	185	871	67	952	857	88	500	...
Strafford.....	88	82	96	84	17	160	3	147	141	96	...	...
Total.....	3,567	3,533	2,987	2,962	620	4,973	356	5,000	4,483	89	1450	21

TABLE No. IV.—STRAFFORD COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Barrington			10	\$24.00	1	3	2	2	...
Dover	2	\$90.00	32	44.41	...	...	6	10	2
Durham	1	44.00	5	36.00	2	...	...	1	3
Farmington	1	24.00	13	31.27	...	2	...	1	3
Lee			5	34.66	...	...	1	...	1
Madbury			5	26.00	1	2	...	...	...
Middleton			4	23.00	1	1	...	...	...
Milton	2	50.00	11	32.00	3	...	2	...	...
New Durham	2	24.00	9	22.43	3	2	...	...	...
Rochester	2	47.00	26	38.28	2	3	12	2	5
Rollinsford	1	33.33	6	34.66	1	2	1	1	1
Somersworth	2	90.00	23	38.00	2	...	3	10	3
Strafford			12	23.53	...	2	...	...	...
Total	13	\$50.28	161	\$31.40	19	17	27	27	24

TABLE No. V.—STRAFFORD COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Barrington ...	\$1,145.00	\$600.00		\$134.50			\$169.50		\$2,049.00
Dover	21,095.00	6,000.00	\$1,600.00	833.50			793.93	\$898.36	31,220.79
Durham	1,440.00	1,700.00	200.00	56.00		\$100.00			3,496.00
Farmington..	2,720.00	1,600.00	496.02	215.50			443.72	2,131.93	7,607.17
Lee	745.00		34.71	34.50			85.46	146.18	1,045.85
Madbury	660.00			21.00	\$11.40		33.17		725.57
Middleton ...	195.00	150.00		25.00	36.61	85.87	52.70		545.18
Milton	1,590.00	800.00	500.00	164.50	1,579.62		212.40	194.33	5,040.85
New Durham	420.00	203.72		56.00	180.00	154.43	88.70	27.00	1,129.85
Rochester	9,760.00	38,740.00		634.50			916.24	1,724.19	51,774.93
Rollinsford ...	2,690.00	1,360.00		155.50			87.80	75.00	4,368.30
Somersworth	7,170.00	9,830.00		507.50			304.38		17,811.88
Strafford	1,100.00	500.00		93.00	40.00		111.18		1,844.18
Total	\$50,730.00	\$61,483.72	\$2,830.73	\$2,931.00	\$1,847.63	\$340.30	\$3,299.18	\$5,196.99	\$128,659.55

TABLE No. VI.—STRAFFORD COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Tuant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Barrington ...	\$322.44	\$82.12	\$404.56	\$1,548.00	.....	\$168.00	\$18.00	\$149.15	\$2,287.71
Dover.....	1,015.30	603.01	1,618.31	22,755.45	\$1,500.00	110.00	500.00	328.04	26,811.80
Durham.....	107.01	133.00	240.01	1,908.60	133.33	.....	.....	1,083.65	3,365.59
Farmington..	306.39	362.97	669.36	5,802.37	.....	90.00	55.50	1,268.45	8,155.68
Lee.....	.....	34.71	34.71	846.00	.....	60.00	.....	83.70	1,024.41
Madbury.....	14.35	9.90	24.25	585.00	.....	45.00	.....	28.65	682.90
Middleton....	29.00	2.00	31.00	473.00	.....	25.00	.....	.....	529.00
Milton.....	552.96	123.59	676.55	3,251.50	.....	195.00	.....	80.45	4,203.50
New Durham.	22.50	31.66	54.16	1,020.00	.....	57.50	.....	30.06	1,161.72
Rochester....	615.75	426.34	1,042.09	14,740.04	1,000.00	25.00	50.00	5,097.99	21,955.12
Rollinsford...	311.90	61.92	373.82	3,096.00	.....	60.00	10.00	476.69	4,016.51
Somersworth.	552.23	887.35	1,439.58	12,478.10	.....	110.75	150.00	3,770.10	17,948.53
Strafford.....	163.56	12.15	175.71	1,606.50	.....	75.00	13.50	10.30	1,881.01
Total.....	\$4,013.39	\$2,770.72	\$6,784.11	\$70,110.56	\$2,633.33	\$1,291.25	\$797.00	\$12,407.23	\$94,023.48

TABLE No. VI.—*Continued.*—STRAFFORD COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Barrington			\$200.00	\$2,287.71	\$2,487.71	.0054	\$13.44	\$2.18
Dover			1,681.03	26,811.80	28,492.83	.0034	19.16	1.03
Durham			130.41	3,365.59	3,496.00	.0040	28.30	1.94
Farmington			266.62	8,155.68	8,422.30	.0072	23.26	1.84
Lee				1,024.41	1,024.41	.0036	23.28	.78
Madbury			42.67	682.90	725.57	.0031	19.87	.66
Middleton				529.00	529.00	.0054	9.44	.55
Milton			176.55	4,203.50	4,380.05	.0071	18.11	2.92
New Durham			102.58	1,161.72	1,264.30	.0051	14.36	.62
Rochester	\$5,253.30	\$11,673.47		21,955.12	33,881.89	.0084	32.33	1.00
Rollinsford		115.00	141.65	4,016.51	4,273.16	.0041	17.33	1.51
Somersworth			336.46	17,948.53	18,284.99	.0050	19.31	.94
Strafford			24.00	1,881.01	1,905.01	.0642	12.95	1.19
Total	\$5,253.30	\$11,788.47	\$3,101.97	\$94,023.48	\$114,167.22	.0050	\$19.78	\$1.35

TABLE No. I.—SULLIVAN COUNTY.

(For the year ending August 1, 1901.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Acworth.....	1	6	.....	3	1	29	18	27.00
Charlestown.....	1	10	6	1	1	32	12	28.60
Claremont.....	1	22	11	1	.....	36	35	35.81
Cornish.....	1	12	.....	4	1	29	10	22.58
Croydon.....	1	4	.....	2	.....	30	20	26.05
Goshen.....	1	3	.....	2	.....	29	18	21.66
Grantham.....	1	3	.....	2	.....	22	21	21.33
Langdon.....	1	3	.....	2	.....	30	20	26.66
Lempster.....	1	4	.....	1	.....	33	21	25.00
Newport.....	1	15	7	1	2	35	22	33.20
Plainfield.....	1	10	.....	4	1	30	10	23.20
Springfield.....	1	6	.....	4	.....	22	20	20.66
Sunapee.....	1	7	3	2	.....	31	26	29.42
Unity.....	1	7	.....	4	.....	25	24	24.85
Washington.....	1	5	.....	2	1	24	18	21.80
Total.....	15	117	27	33	7	.....	.....	25.85

TABLE No. II.—SULLIVAN COUNTY.

(For the year ending August 1, 1901.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Acworth	12	1	.....	14	\$3,500 00	\$150. 00
Charlestown	7	.....	.....	11	18,500. 00	100. 00
Claremont	16	1	.....	26	20,000 00	.....
Cornish	13	.....	.....	13	5,000 00	120. 00
Croydon	4	.....	.....	4	2,600. 00	100. 00
Goshen	5	.....	.....	5	600. 00	100. 00
Grantham	4	1	.....	4	1,000. 00	150. 00
Langdon	5	.....	.....	5	1,500. 00	50. 00
Lempster	8	.....	.....	8	2,500. 00	125. 00
Newport	13	1	.....	23	29,000 00	500. 00
Plainfield	12	1	.....	13	1,750. 00	25. 00
Springfield	9	1	.....	9	1,300. 00	100. 00
Sunapee	9	.....	.....	9	4,050 00	167. 00
Unity	7	.....	.....	7	4,300. 00	250. 00
Washington	9	.....	.....	10	3,500 00	20. 00
Total	133	6	.....	161	\$99,100. 00	\$1,957. 00

TABLE No. III.—SULLIVAN COUNTY.

(For the year ending August 1, 1901.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Enrolled for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.								
Acworth.....	40	38	47	51	6	83	9	93	85	90	....	2
Charlestown ..	154	145	131	130	8	242	11	195	163	83	....	...
Claremont.....	506	480	432	387	67	747	5	751	669	89	261	14
Cornish.....	95	68	105	79	17	162	5	150	137	91	....	5
Croydon.....	60	29	60	29	2	80	7	66	60	91	....	...
Goshen.....	20	18	30	21	4	38	9	36	30	81	....	...
Grantham.....	43	40	42	40	11	64	7	71	60	84	....	...
Langdon.....	32	21	32	22	3	47	4	41	35	85	....	...
Lempster.....	41	29	50	39	5	76	8	68	60	87	....	...
Newport.....	247	240	301	288	30	503	56	476	420	88	....	...
Plainfield.....	81	82	81	88	7	154	8	121	101	83	...	10
Springfield.....	41	40	47	49	7	81	8	76	65	85	....	...
Sunapee.....	103	81	104	82	10	167	9	151	137	90	....	1
Unity.....	50	40	57	56	12	96	5	88	77	87	....	...
Washington...	46	34	44	45	5	76	8	70	66	94	....	...
Total.....	1,559	1,385	1,563	1,406	194	2,616	159	2,453	2,165	88	261	32

TABLE No. IV.—SULLIVAN COUNTY.

(For the year ending August 1, 1901.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Acworth.....			10	\$22.33	1	9	1		
Charlestown.....	1	\$60.00	9	32.89	1		2		1
Claremont.....			22	36.34			12		1
Cornish.....	2	20.00	24	21.35	6	10			
Croydon.....			9	24.82	1	3	2		
Goshen.....	1	27.33	2	23.00		1	1	1	
Grantham.....			6	25.67		4	1		
Langdon.....			3	25.55				2	
Lempster.....	3	29.33	6	24.00		1	1	1	
Newport.....	2	32.00	13	29.23	2	2	5	2	3
Plainfield.....	1	28.00	16	22.66	6	7	1	1	1
Springfield.....			6	20.25	1	7	1	3	
Sunapee.....	1	40.00	7	21.15	2	6			
Unity.....			14	20.66	4	7			
Washington.....			8	25.00	2	2			
Total.....	11	\$33.80	155	\$25.00	26	59	17	10	6

TABLE No. V.—SULLIVAN COUNTY.

(For the year ending August 1, 1901.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Acworth	\$580 00	\$300.00	.....	\$60.00	.....	.....	\$69.23	.....	\$1,009.23
Charlestown...	1,700.00	1,950.00	\$300.00	113.00	\$11.66	.....	121.90	.....	4,196.56
Claremont.....	6,740.00	3,307.00	.....	453.00	.....	.....	314.40	\$2.00	10,816.40
Cornish	930.00	300.00	125.35	109.00	7.79	\$260.51	67.60	30.00	1,830.25
Croydon	385.00	.....	103.06	45.00	48.00	.....	10.51	.....	591.57
Goshen	300.00	100.00	.....	29.50	.....	.....	73.34	.....	502.84
Grantham	270.00	50.00	.....	41.00	13.20	114.92	58.30	.....	547.42
Langdon	435.00	100.00	.....	29.50	.....	.....	28.56	.....	593.06
Lempster	325.00	420.00	116.99	39.00	55.95	115.47	49.29	.....	1,121.70
Newport	4,190.00	5,200.00	.....	235.00	94.00	.....	277.30	6.00	10,002.30
Plainfield	990.00	300.00	110.00	92.00	100.00	.....	95.00	10.20	1,697.20
Springfield	285.00	250.00	.....	47.00	.....	156.55	56.56	13.50	808.61
Sunapee	955.00	300.00	177.85	92.00	.....	.....	127.20	.....	1,652.05
Unity	430.00	185.00	100.00	64.00	176.52	143.32	56.10	.....	1,154.94
Washington	525.00	50.00	.....	38.00	52.50	.....	81.90	.....	747.40
Total	\$19,040.00	\$12,812.00	\$1,033.25	\$1,487.00	\$559.62	\$790.77	\$1,487.19	\$61.70	\$37,271.53

TABLE No. VI.—SULLIVAN COUNTY.

(For the year ending August 1, 1901.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Tuant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Acworth	\$108.84	\$18.80	\$127.64	\$963.50	.....	\$60.00	\$3.00	\$133.65	\$1,287.79
Charlestown	225.00	70.00	295.00	2,574.00	.....	150.00	.....	1,360.00	4,379.00
Claremont	175.00	219.54	394.54	7,338.58	.....	350.00	10.00	1,956.69	10,049.81
Cornish	109.25	16.10	125.35	1,328.00	.....	75.00	3.75	1,636.30	3,168.40
Croydon	91.50	11.56	103.06	600.60	.....	37.00	.....	53.67	796.33
Goshen	3.03	1.85	4.88	455.00	.....	32.00	2.00	36.32	530.20
Grantham	8.60	5.44	14.04	473.80	.....	24.62	.....	11.50	523.96
Langdon	40.00	31.82	71.82	512.20	.....	30.50	.....	100.15	714.67
Lempster	71.84	13.65	85.49	636.00	.....	51.00	5.00	193.66	971.15
Newport	621.28	262.12	883.40	6,525.57	.....	250.00	40.00	1,999.49	9,698.46
Plainfield	60.00	50.24	110.24	1,418.40	.....	100.00	8.00	281.00	1,917.64
Springfield	87.24	9.22	96.46	668.00	.....	37.75	5.00	79.95	887.16
Sunapee	178.05	68.00	246.05	1,323.00	.....	65.50	.....	63.02	1,697.57
Unity	115.74	15.12	130.86	903.50	.....	36.00	.....	19.58	1,089.94
Washington	50.05	15.32	65.37	741.00	.....	40.11	4.75	66.77	918.00
Total	\$1,945.42	\$803.78	\$2,754.20	\$26,461.15	.....	\$1,339.48	\$81.50	\$7,993.75	\$38,630.08

TABLE No. VI.—Continued.—SULLIVAN COUNTY.

(For the year ending August 1, 1901.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Acworth	\$1,287.79	\$1,287.79	.0046	\$13.73	\$1.37
Charlestown	4,379.00	4,379.00	.0049	20.40	1.50
Claremont	\$293.87	10,049.81	10,343.68	.0060	13.76	.52
Cornish	123.30	3,168.40	3,291.70	.0030	12.52	.83
Croydon	796.33	796.33	.0039	12.07	1.56
Goshen	12.90	530.20	543.10	.0043	16.48	.13
Grantham	15.50	523.96	539.46	.0038	7.60	.20
Langdon	30.81	714.67	745.48	.0035	18.18	1.75
Lempster	37.66	971.15	1,008.81	.0061	14.75	1.04
Newport	\$2,000.00	.....	9,698.46	11,698.46	.0062	20.40	1.85
Plainfield	92.58	1,917.64	2,010.22	.0041	16.91	.91
Springfield	24.89	887.16	912.05	.0046	12.00	1.26
Sunapee	67.12	1,697.57	1,764.69	.0036	11.69	1.63
Unity	65.00	.....	1,089.94	1,154.94	.0032	9.16	1.03
Washington	918.00	918.00	.0026	13.11	.93
Total	\$2,065.00	\$698.63	\$38,630.08	\$41,393.71	.0043	\$16.87	\$1.11

STATISTICAL SUMMARY

No.		Belknap.	Carroll.	Cheshire.	Coos.
TOWNS.					
1	Towns having organized schools...	11	17	23	21
DISTRICTS.					
2	Districts under special acts.....	2	2	1	4
SCHOOLS.					
3	Public schools.....	130	140	187	182
4	Graded.....	44	22	44	60
5	High schools.....	3	.....	5	7
6	Number averaging twelve and more than six.....	35	39	35	49
7	Number averaging six or less.....	8	5	4	9
8	Average length of schools in weeks of five days.....	27.13	26.61	27.48	27.73
SCHOOLHOUSES.					
9	Number.....	117	139	164	149
10	Unfit for use.....	5	.....	14	.....
11	Built during year.....	2	.....	1	1
12	Number of schoolrooms.....	156	156	248	206
13	Estimated value of buildings, furniture, and sites.....	\$167,825.00	\$92,800.00	\$287,950.00	\$160,535.00
14	Estimated value of apparatus.....	4,064.00	3,935.00	6,791.00	5,258.00
SCHOLARS.					
15	{ Truant officers' enumera- (Boys	1,653	1,520	2,831	3,311
16		1,582	1,563	2,878	3,249
17	Boys attending two weeks or more	1,850	1,566	2,966	2,671
18	Girls attending two weeks or more	1,775	1,572	3,003	2,697
19	Number under six years.....	279	312	451	454
20	Number between six and sixteen ..	3,170	2,691	5,156	4,591
21	Number over sixteen.....	176	135	362	323
22	Average membership of all.....	2,882	2,653	4,867	4,459
23	Average attendance of all.....	2,635	2,290	4,265	3,886
24	Average attendance to each school	20	16	22	21
25	Per cent. of attendance.....	88	86	82	85
26	Number in parochial schools.....	.....	1	201	803
27	Number in other private schools.....	4	23	24	29
28	Whole number reported under 17, 18, 26, 27.....	3,629	3,162	6,194	6,200
29	Number attending public high schools.....	176	.....	330	321
30	Average number of weeks in high schools.....	35.33	.....	35.80	34.85
TEACHERS (below high schools).					
31	Number schools having male teachers.....	8	23	11	15
32	Average wages per month.....	\$32.21	\$33.89	\$37.49	\$34.77
33	Number schools having women teachers.....	155	160	220	220
34	Average wages per month.....	\$27.61	\$26.41	\$29.37	\$24.78
HIGH SCHOOL TEACHERS.					
35	Men teachers.....	4	.....	8	7
36	Average wages per month.....	\$80.96	.....	\$84.43	\$95.18
37	Women teachers.....	3	.....	6	7
38	Average wages per month.....	\$62.90	.....	\$51.60	\$51.08

BY COUNTIES.—1901.

No.	Grafton.	Hillsborough.	Merrimack.	Rockingham.	Strafford.	Sullivan.
1	37	31	27	37	13	15
2	13	2	4	2	2	.....
3	300	402	287	264	167	114
4	53	233	94	90	97	27
5	12	11	5	7	5	2
6	73	72	85	45	17	31
7	21	15	22	6	8	7
8	27.00	29 50	27.82	31.40	30.77	25.85
9	279	256	150	231	123	133
10	13	5	11	1	6	6
11	3	.....	.....	.....	.....	.....
12	365	507	320	305	218	161
13	\$317,058.00	\$1,360,037.00	\$584,850.00	\$210,870.00	\$470,250.00	\$99,100.00
14	9,160.00	78,637.00	49,545.00	8,960.50	8,200.00	1,957.00
15	3,513	9,504	3,452	4,293	3,567	1,559
16	3,520	9,771	4,343	4,332	3,533	1,385
17	4,015	7,439	4,278	4,207	2,987	1,563
18	3,914	7,264	4,112	4,038	2,962	1,406
19	605	1,235	828	801	620	194
20	6,757	12,673	7,024	7,104	4,973	2,616
21	567	795	454	340	356	159
22	6,165	11,275	7,159	6,938	5,000	2,453
23	5,928	10,498	6,363	6,077	4,483	2,165
24	20	26	22	23	21	19
25	86	93	89	87	89	88
26	2	5,779	1,092	503	1,450	261
27	37	29	195	268	21	32
28	7,968	20,511	9,677	9,016	7,420	3,262
29	634	1,052	493	464	498	185
30	35.50	36.63	36.60	36.42	37.20	36.50
31	18	24	13	19	13	11
32	\$25.11	\$48.04	\$41.15	\$46.28	\$50.28	\$33.80
33	252	441	359	271	161	155
34	\$26.16	\$30.01	\$28.14	\$30.88	\$31.40	\$25.00
35	15	14	6	8	10	3
36	\$104.72	\$106.92	\$117.28	\$97.71	\$104.83	\$130.50
37	22	28	14	10	14	10
38	\$32.88	\$56.35	\$57.30	\$53.59	\$58.80	\$50.69

STATISTICAL SUMMARY

No.		Belknap.	Carroll.	Cheshire.	Coos.
TEACHERS OF ALL GRADES.					
39	Number teaching first time.....	25	17	33	36
40	Number not graduates of high schools or academies.....	53	70	46	76
41	Normal School graduates.....	31	15	25	43
42	Training School graduates.....	6	21	29	23
43	College graduates.....	7	10	22	15
REVENUE.					
44	Amount required by law.....	\$23,305 00	\$13,280 00	\$39,570 00	\$20,816 00
45	Additional amount voted.....	17,557 50	10,516 00	32,010 16	32,481 65
46	Raised for books and supplies...	1,025 18	1,573 45	6,357 33	4,075 05
47	Literary fund.....	1,795 50	1,612 00	2,954 00	2,644 50
48	Local funds.....	344 49	610 07	1,076 05	1,983 57
49	State appropriation under law of 1899.....	200 00	3,629 02	1,346 70	6,932 09
50	Dog licenses.....	1,502 27	1,510 94	3,019 03	1,395 73
51	From all other sources.....	1,427 71	1,913 17	2,148 55	3,979 87
52	Total amount.....	47,157 65	34,644 65	88,481 82	74,308 46
EXPENDITURES.					
53	Text-books.....	\$1,913 94	\$1,789 37	\$4,634 40	\$4,084 82
54	Supplies.....	1,399 37	473 25	2,413 65	1,911 71
55	Teachers' salaries.....	34,039 54	27,507 88	56,309 28	47,652 52
56	Superintendents.....	1,399 99		1,955 55	
57	School boards.....	1,103 62	1,419 05	2,260 74	1,531 65
58	Truant officers.....	66 65	82 00	92 76	93 37
59	Miscellaneous.....	6,914 02	4,432 64	13,353 47	7,315 15
60	New buildings.....	24,497 42	1,000 00	13,600 00	1,275 00
61	Interest and debt.....	1,680 00	684 65	2,929 73	3,477 21
62	Permanent repairs.....	664 33	1,227 18	4,008 58	6,892 18
63	Total amount.....	73,678 88	38,616 02	101,558 16	74,239 61
64	Rate of school assessment.....	.0047	.0049	.0045	.0048
65	Average of total expenditure per pupil.....	17.06	14.17	18.07	16.64
66	Average for books and supplies per pupil.....	1.14	.85	1.44	1.34

BY COUNTIES. — 1901.

No.	Grafton.	Hillsborough.	Merrimack.	Rockingham.	Strafford.	Sullivan.
39	63	55	43	26	19	26
40	126	27	87	33	17	59
41	51	75	55	46	27	17
42	20	143	55	42	27	10
43	28	49	24	22	24	6
44	\$40,105.00	\$144,915.00	\$74,751.35	\$69,220.00	\$50,730.00	\$19,040.00
45	50,328.05	113,952.42	44,281.66	29,153.14	61,483.72	12,812.00
46	4,722.35	3,213.44	3,740.31	5,931.97	2,830.73	1,033.25
47	4,017.00	7,241.00	4,059.50	4,102.50	2,931.00	1,487.00
48	1,605.76	4,186.94	313.50	1,827.04	1,847.63	559.62
49	2,834.30	230.07	703.07	3,245.16	340.30	790.77
50	3,635.87	5,373.29	3,639.19	4,524.67	3,299.13	1,487.19
51	4,814.33	3,234.15	4,076.41	2,484.43	5,196.99	61.70
52	112,062.86	282,346.31	135,614.99	120,493.91	128,659.55	37,271.53
53	\$5,548.49	\$11,356.49	\$6,079.66	\$5,291.93	\$4,013.39	\$1,945.42
54	2,989.72	6,225.59	2,248.24	3,508.79	2,770.72	808.78
55	74,714.82	192,608.76	80,197.06	87,694.21	70,110.56	26,461.15
56	125.00	3,950.00	2,500.00	3,156.77	2,633.33	.....
57	2,941.65	3,459.49	2,793.68	2,293.12	1,291.25	1,339.48
58	220.85	1,734.35	647.46	682.60	797.00	81.50
59	15,410.07	55,093.48	25,397.19	15,830.33	12,407.23	7,993.75
60	4,139.37	325.00	32,936.46	239.00	5,253.30	.....
61	10,307.68	4,184.30	15,965.00	259.07	11,788.47	2,065.00
62	4,017.07	4,330.60	5,581.60	9,222.49	3,101.97	698.63
63	120,414.72	283,267.98	174,346.35	128,178.31	114,167.22	41,393.71
64	.0052	.0045	.0046	.0044	.0050	.0043
65	19.53	25.09	24.49	18.41	19.78	16.38
66	1.38	1.55	1.16	1.27	1.35	1.11

TABLE No. I.—BELKNAP COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Alton	1	11	11	1	3	28	25	26.00
Barnstead	1	13	.....	7	.....	25	15	24.23
Belmont	1	9	4	4	.....	31	27	30.60
Center Harbor.....	1	5	2	3	.....	24	24	24.00
Gilford	1	8	.....	3	.....	31	20	22.12
Gilmanton.....	1	12	.....	4	.....	27	21	24.33
Laconia	1	28	26	.....	.....	36	36	36.00
Meredith	2	13	4	3	2	33	10	23.07
New Hampton.....	1	10	.....	5	.....	20	20	20.00
Sanbornton.....	1	11	.....	2	.....	24	*14	23.90
Tilton	2	10	6	.....	.....	36	30	34.00
Total	13	130	53	32	5	.....	.....	26.20

* One term, pupils were received for ten weeks in other schools.

TABLE No. II.—BELKNAP COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Alton	11	.....	.....	13	\$8,000.00	\$300.00
Barnstead	13	.....	.....	13	5,600.00	150.00
Belmont	7	.....	.....	10	9,200.00	200.00
Center Harbor	4	.....	.....	5	2,175.00	50.00
Gilford	11	1	.....	11	4,000.00	100.00
Gilmanton	17	1	.....	17	4,500.00	350.00
Laconia	12	2	2	37	100,000.00	2,500.00
Meredith	14	2	.....	17	10,250.00	635.00
New Hampton	12	1	.....	12	5,000.00	200.00
Sanbornton	14	.....	.....	14	6,700.00	300.00
Tilton	5	.....	.....	12	32,000.00	.....
Total	120	7	2	161	\$187,425.00	\$4,785.00

TABLE No. III.—BELKNAP COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant of- ficers' enu- meration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tu- tion paid by town.	Pupils attending academy, tuition paid by town.	Average mem- ber- ship.	Average daily at- tendance.	Per cent. of attend- ance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Alton.....	99	82	115	100	19	184	12	3	.....	.....	197	179	90	.....	.....
Barnstead.....	79	93	92	93	4	175	6	.....	12	3	156	139	89	.....	.....
Belmont.....	112	123	116	115	25	197	9	.....	4	4	178	156	87	.....	.....
Center Harbor..	39	41	50	51	16	84	1	.....	.....	1	76	66	87	.....	.....
Gilford.....	49	49	49	51	12	87	1	.....	6	5	86	79	92	1	.....
Gilmanton.....	108	105	111	109	15	198	7	.....	1	14	217	199	91	.....	.....
Laconia.....	717	718	715	733	105	1,239	104	15	.....	.....	1,135	1,088	95	.....	.....
Meredith.....	119	95	147	133	23	241	16	.....	1	10	274	248	90	.....	.....
New Hampton..	56	54	75	70	14	128	3	.....	1	30	131	112	84	.....	15
Sanbornton....	92	62	101	78	15	162	2	.....	11	3	138	119	86	.....	.....
Tilton.....	180	191	202	211	25	384	4	.....	.....	30	390	349	89	.....	.....
Total.....	1,650	1,613	1,773	1,744	273	3,079	273	18	36	100	2,978	2,734	92	1	15

TABLE No. IV.—BELKNAP COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Alton	1	\$24.00	11	\$27.27	2	.....	3	1	.....
Barnstead	1	24.00	11	25.09	3	4	3	.....	.....
Belmont	1	60.00	8	31.24	3	1	3	.....	.....
Center Harbor .....	.....	.....	5	24.32	1	.....	.....	.....	.....
Gilford .....	.....	.....	8	26.00	2	6	.....	1	.....
Gilmanston	1	26.00	11	22.00	1	7	13	4	.....
Laconia .....	.....	.....	28	42.12	.....	.....	3	1	.....
Meredith	1	90.89	12	27.50	3	2	3	1	1
New Hampton	1	23.33	15	23.81	2	6	.....	.....	.....
Sanbornton	1	24.00	11	23.45	2	3	.....	.....	.....
Tilton	1	88.00	9	36.00	.....	.....	5	.....	.....
Total	8	\$45.03	129	\$28.07	19	29	35	8	1

TABLE No. V.—BELKNAP COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Alton	\$1,340.00	\$1,375.00	\$203.14	\$124.44	.....	\$300.00	\$137.10	\$42.60	\$3,521.68
Barnstead	1,130.00	600.00	150.00	103.50	\$138.19	.....	147.80	11.93	2,287.42
Belmont	1,210.00	1,150.00	173.79	128.01	.....	.....	.....	.....	2,661.80
Center Harbor ..	600.00	100.00	.....	41.31	.....	.....	44.20	27.60	813.11
Gilford	855.00	100.00	.....	51.51	33.66	.....	132.00	.....	1,172.17
Gilmanton	1,160.00	300.00	211.09	116.79	.....	382.07	35.60	17.00	2,222.55
Laconia	10,660.00	7,780.75	.....	752.25	.....	.....	675.00	495.20	20,363.20
Meredith	1,715.00	1,590.00	.....	156.06	24.00	.....	65.00	64.00	3,614.06
New Hampton ..	760.00	200.00	.....	80.58	.....	.....	61.24	10.50	1,112.32
Sanbornton	1,050.00	400.00	.....	94.35	77.71	.....	.....	5.75	1,627.81
Tilton	2,825.00	3,836.00	500.00	205.00	736.50	.....	167.93	63.44	8,333.87
Total	\$23,305.00	\$17,431.75	\$1,238.02	\$1,859.80	\$1,010.06	\$682.07	\$1,465.87	\$737.42	\$47,729.99

TABLE No. VI.—BELKNAP COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Alton	\$133.40	\$71.32	\$204.72	\$2,325.70	\$500.01	\$65.00	\$2.60	\$193.76	\$3,291.79
Barnstead	7.60	41.51	49.11	1,920.20	.....	125.00	15.00	143.60	2,252.91
Belmont	139.19	34.60	173.79	2,197.00	.....	115.64	18.85	415.81	2,321.09
Center Harbor.	74.50	13.03	87.53	730.00	.....	35.00	.....	58.45	910.98
Gilford	93.01	21.42	114.43	1,030.50	.....	60.00	10.00	69.49	1,284.42
Gilmanton	195.42	15.67	211.09	1,639.00	.....	90.00	.....	171.83	2,111.92
Laconia	753.00	621.00	1,374.00	16,387.29	1,250.00	90.00	.....	2,893.91	21,995.20
Meredith	251.02	84.27	335.29	2,754.00	.....	180.00	.....	682.50	3,951.79
New Hampton.	116.40	43.65	160.05	1,135.00	.....	88.00	10.00	43.02	1,436.07
Sanbornton	162.16	21.59	183.75	1,493.00	.....	125.00	.....	118.15	1,919.90
Tilton	546.37	.....	546.37	3,282.05	.....	90.00	20.00	1,204.72	5,143.14
Total	\$2,472.07	\$968.06	\$3,440.13	\$34,893.74	\$1,750.01	\$1,063.64	\$76.45	\$5,995.24	\$47,219.21

TABLE No. VI.— *Continued.*— BELKNAP COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Alton.....			\$17.13	\$3,291.79	\$3,308.92	.0053	\$15.73	\$1.03
Barnstead.....			211.55	2,252.91	2,464.46	.0052	15.79	.31
Belmont.....			125.00	2,921.09	3,046.09	.0057	15.36	.97
Center Harbor.....				910.98	910.98	.0036	11.87	1.14
Gilford.....			24.79	1,284.42	1,309.21	.0028	14.41	1.33
Gilmanton.....			121.77	2,111.92	2,233.69	.0046	12.14	1.23
Laconia.....	\$16,000		500.00	21,995.20	38,495.20	.0049	19.81	1.21
Meredith.....			299.75	3,951.79	4,251.54	.0063	13.17	1.22
New Hampton.....			7.50	1,436.07	1,443.57	.0047	10.96	1.22
Sanbornton.....				1,919.90	1,919.90	.0050	13.03	1.33
Tilton.....		\$1,900	738.17	5,143.14	7,781.31	.0080	11.75	1.41
Total.....	\$16,000	\$1,900	\$2,045.66	\$47,219.21	\$67,164.87	.0051	\$17.21	\$1.15

TABLE No. I.—CARROLL COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Albany.....	1	4	.....	1	1	20	20	20.00
Bartlett.....	2	9	3	1	.....	30	30	30.00
Brookfield.....	1	3	.....	2	.....	23	21	22.33
Chatham.....	1	4	.....	2	.....	30	24	27.00
Conway.....	1	18	4	1	.....	28	22	27.78
Eaton.....	1	6	.....	.....	.....	20	20	20.00
Effingham.....	1	7	.....	1	.....	28	10	23.71
Freedom.....	1	6	.....	1	1	25	22	23.50
Hart's Location*.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	2	7	.....	2	3	30	25	28.43
Madison.....	1	5	.....	2	.....	27	26	26.20
Moultonborough.....	1	8	.....	1	.....	27	27	27.00
Ossipee.....	1	12	.....	3	2	28	16	26.75
Sandwich.....	1	10	.....	4	.....	28	11	24.80
Tamworth.....	1	10	2	3	.....	31	25	29.50
Tuftonborough.....	1	5	.....	.....	.....	29	29	29.00
Wakefield.....	1	15	5	3	.....	32	11	25.53
Wolfeborough.....	1	15	8	2	1	35	12	33.46
Total.....	19	144	22	29	8	.....	.....	26.18

* No report received.

TABLE No. II.—CARROLL COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture and sites.	Estimated value of apparatus.
Albany.....	4	.....	.....	4	\$1,800.00	\$400.00
Bartlett.....	7	.....	.....	10	9,500.00	200.00
Brookfield.....	3	.....	.....	3	1,600.00	75.00
Chatham.....	5	.....	.....	5	4,000.00	200.00
Conway.....	15	1	.....	23	20,000.00	200.00
Eaton.....	7	.....	.....	7	5,000.00	100.00
Effingham.....	7	.....	.....	7	3,900.00	200.00
Freedom.....	5	.....	.....	6	3,000.00	50.00
Hart's Location*	.....	.....	.....	.....	.....	.....
Jackson.....	6	.....	.....	7	3,000.00	50.00
Madison.....	6	.....	.....	6	2,000.00	25.00
Moniltonborough.....	10	1	.....	10	3,500.00	60.00
Ossipee.....	12	.....	.....	12	9,000.00	500.00
Sandwich.....	9	.....	.....	10	3,500.00	75.00
Tamworth.....	11	.....	.....	12	3,000.00	250.00
Tuftonborough.....	5	.....	.....	5	5,000.00	500.00
Wakefield.....	12	.....	.....	15	3,500.00	250.00
Wolfeborough.....	11	.....	.....	15	13,700.00	500.00
Total.....	135	2	.....	157	\$95,000.00	\$3,635.00

* No report received.

TABLE No. III.—CARROLL COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Albany.....	29	18	28	18	5	40	1	.....	.....	.....	46	34	73	.....	2
Bartlett.....	138	114	133	119	36	212	4	.....	.....	.....	225	181	80	.....	.....
Brookfield.....	32	29	35	28	5	56	2	.....	.....	.....	55	52	85	.....	.....
Chatham.....	22	39	25	42	3	55	9	.....	.....	.....	53	48	90	.....	.....
Conway.....	270	277	291	285	61	488	27	.....	.....	.....	490	425	84	.....	3
Eaton.....	47	52	45	53	12	83	3	.....	.....	.....	80	70	91	.....	.....
Effingham.....	64	43	70	47	16	91	10	.....	.....	.....	117	94	80	.....	.....
Freedom.....	36	40	43	55	5	87	6	.....	3	.....	83	78	94	.....	.....
Hart's Location*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	55	64	55	64	15	96	8	.....	.....	.....	100	85	85	.....	.....
Madison.....	55	42	53	46	4	89	6	.....	2	2	90	78	87	.....	.....
Moultonborough	86	80	87	80	6	151	10	.....	.....	.....	150	140	93	.....	6
Ossipee.....	147	130	157	135	20	260	12	.....	5	.....	225	187	83	.....	.....
Sandwich.....	82	82	78	79	15	134	8	.....	3	.....	148	126	86	.....	7
Tamworth.....	109	90	119	107	20	196	10	.....	.....	.....	168	148	82	.....	8
Tuftonborough.	52	47	52	47	7	87	5	.....	.....	.....	99	77	84	.....	.....
Wakefield.....	183	177	187	181	29	293	46	.....	6	.....	308	243	79	.....	.....
Wolfeborough..	145	174	176	179	30	323	2	.....	.....	.....	287	253	89	.....	12
Total.....	1,582	1,500	1,565	1,634	289	2,741	169	.....	19	2	2,724	2,324	86	.....	38

* No report received.

TABLE No. IV. — CARROLL COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Albany.....	1	\$24.00	3	\$28.00	.....	.....	.....	.....	.....
Bartlett.....	2	42.00	7	28.60	1	1	4	.....	2
Brookfield.....	.....	.....	3	26.00	.....	1	.....	.....	.....
Chatham.....	2	26.00	2	24.00	3	4	.....	.....	.....
Conway.....	2	44.00	16	31.00	1	6	3	3	3
Eaton.....	3	22.66	6	18.66	.....	2	.....	.....	.....
Effingham.....	2	28.00	5	27.43	.....	.....	1	2	1
Freedom.....	.....	.....	6	24.00	.....	1	.....	.....	.....
Hart's Location*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	1	40.00	6	25.00	3	3	2	.....	.....
Madison.....	1	34.00	5	26.00	.....	5	.....	.....	1
Moultonborough.....	.....	.....	8	26.00	1	4	.....	.....	.....
Ossipee.....	6	32.11	6	27.50	4	10	2	.....	2
Sandwich.....	2	22.00	8	24.00	2	8	2	.....	.....
Tamworth.....	2	30.00	8	27.00	.....	4	.....	1	.....
Tuftonborough.....	.....	.....	5	28.00	.....	3	.....	.....	.....
Wakefield.....	1	28.00	14	30.00	2	5	5	2	.....
Wolfeborough...	3	39.00	12	30.00	3	.....	3	1	1
Total.....	28	\$31.67	120	\$26.54	20	57	22	9	10

* No report received.

TABLE No. V.—CARROLL COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Albany.....	\$120.00	\$400.00	.....	\$24.48	.....	\$149.13	\$40.80	.....	\$734.41
Bartlett.....	795.00	750.00	.....	130.05	.....	443.58	120.60	\$434.85	2,674.08
Brookfield.....	265.00	25.00	\$48.47	32.13	.....	114.16	49.20	.....	533.96
Chatham.....	140.00	432.00	50.00	31.62	.....	163.13	27.00	.....	843.75
Conway.....	1,810.00	2,575.00	.....	309.06	\$9.40	928.86	193.31	.....	5,825.63
Eaton.....	215.00	250.00	75.00	40.29	26.25	154.40	.....	50.44	811.38
Effingham.....	400.00	400.00	50.00	58.14	.....	181.61	57.20	.....	1,146.95
Freedom.....	510.00	300.00	.....	53.55	.....	.....	30.00	9.00	902.55
Hart's Location*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	515.00	350.00	.....	56.10	166.79	137.79	51.40	.....	1,277.08
Madison.....	350.00	500.00	.....	53.04	.....	183.61	86.40	.....	1,173.05
Moultonborough	690.00	372.00	.....	86.70	115.50	313.05	.....	.....	1,577.25
Ossipee.....	1,115.00	1,000.00	250.00	150.96	.....	467.09	.....	.....	2,983.05
Sandwich.....	915.00	370.00	75.00	85.17	.....	.....	109.69	.....	1,554.86
Tamworth.....	800.00	.....	150.00	93.32	72.00	262.39	148.58	546.72	2,073.01
Tuftonborough..	500.00	100.00	50.00	52.53	400.00	110.92	69.54	.....	1,282.99
Wakefield.....	1,670.00	1,800.00	281.87	158.61	104.75	.....	199.90	.....	4,215.13
Wolfeborough..	2,470.00	800.00	350.00	184.62	258.00	.....	152.00	1,815.31	6,029.93
Total.....	\$13,280.00	\$10,424.00	\$1,380.34	\$1,600.37	\$1,152.69	\$3,609.72	\$1,335.62	\$2,856.32	\$35,639.06

* No report received.

TABLE No. VI.—CARROLL COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Albany.....	\$12.00	\$12.00	\$24.00	\$530.00	.....	\$26.00	\$10.00	.....	\$590.00
Bartlett.....	169.55	50.67	220.22	2,173.23	.....	51.00	20.00	\$370.85	2,835.30
Brookfield.....	37.08	11.39	48.47	435.00	.....	26.00	.....	10.75	520.22
Chatham.....	35.00	4.00	39.00	695.00	.....	22.00	.....	38.00	794.00
Conway.....	170.09	36.55	206.64	4,080.00	.....	200.00	15.00	1,162.71	5,664.35
Eaton.....	43.24	40.76	84.00	683.00	.....	45.50	.....	65.00	877.50
Efingham.....	18.00	12.00	30.00	1,138.00	.....	60.00	.....	40.00	1,268.00
Freedom.....	94.00	4.15	98.15	846.00	.....	45.00	.....	30.00	1,019.15
Hart's Location*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	150.00	.....	150.00	1,354.00	.....	45.00	5.00	55.20	1,609.20
Madison.....	54.07	48.93	103.00	856.00	.....	53.00	10.50	159.44	1,181.94
Moultonborough.	137.73	20.00	157.73	1,359.00	.....	70.00	.....	209.23	1,795.96
Ossipee.....	109.90	84.05	193.95	2,316.00	.....	160.00	25.00	150.49	2,845.44
Sandwich.....	40.79	39.46	80.25	1,377.00	.....	100.00	6.60	54.58	1,618.43
Tamworth.....	154.83	55.65	210.48	1,880.55	.....	110.00	19.78	143.98	2,364.79
Tuftonborough...	86.54	81.95	168.49	972.00	.....	54.00	.....	302.80	1,497.29
Wakefield.....	170.38	111.49	281.87	2,897.00	.....	135.00	.....	630.04	3,943.91
Wolfeborough....	347.45	55.02	402.47	4,053.95	.....	225.00	25.00	1,115.38	5,821.80
Total.....	\$1,830.65	\$668.07	\$2,498.72	\$27,645.73	.....	\$1,427.50	\$136.88	\$4,538.45	\$36,247.28

* No report received.

TABLE No. VI.—*Continued.*—CARROLL COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Albany.....				\$590.00	\$590.00	.0063	\$12.82	\$0.52
Bartlett.....		\$572.82	\$111.40	2,835.30	3,519.52	.0054	12.96	.97
Brookfield.....		62.50	39.00	520.22	621.72	.0040	9.97	.88
Chatham.....				794.00	794.00	.0050	14.26	.73
Conway.....			701.98	5,664.35	6,366.33	.0070	11.07	.42
Eaton.....			19.70	877.50	897.20	.0058	10.36	1.04
Effingham.....		118.00	22.00	1,268.00	1,408.00	.0060	10.68	.25
Freedom.....			25.00	1,019.15	1,044.15	.0040	12.00	1.13
Hart's Location*								
Jackson.....				1,609.20	1,609.20	.0032	16.09	1.50
Madison.....				1,181.94	1,181.94	.0058	11.36	1.14
Moultonborough				1,795.96	1,795.96	.0051	11.97	1.05
Ossipee.....			239.48	2,845.44	3,084.92	.0048	13.71	.86
Sandwich.....			41.45	1,618.43	1,659.88	.0035	11.21	.62
Tamworth.....			214.27	2,364.79	2,579.06	.0070	16.63	1.50
Tuftonborough..				1,497.29	1,497.29	.0027	12.06	.87
Wakefield.....			340.97	3,943.91	4,284.88	.0068	11.90	.92
Wolfeborough...				5,821.80	5,821.80	.0038	20.28	1.40
Total.....		\$753.32	\$1,755.25	\$36,247.28	\$38,755.85	.0050	\$14.50	\$0.91

* No report received.

TABLE No. I.—CHESHIRE COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Alstead	1	8	2	3	.....	30	18	24.25
Chesterfield	1	8	4	12	.....	30	10	27.50
Dublin	1	5	5	3	.....	30	30	30.00
Fitzwilliam	1	9	9	1	.....	30	19	28.66
Gilsum	1	4	.....	2	.....	28	25	27.24
Harrisville	1	4	12	.....	.....	30	30	30.00
Hinsdale	1	10	7	2	.....	36	34	34.40
Jaffrey	1	11	5	2	.....	30	24	27.27
Keene	2	31	27	1	.....	36	10	32.97
Marlborough	1	7	7	.....	.....	36	36	36.00
Marlow	1	4	.....	1	.....	33	30	31.50
Nelson	1	2	.....	1	.....	26	17	21.50
Richmond	1	5	.....	.....	.....	25	15	22.00
Rindge	1	6	.....	1	.....	29	27	27.83
Roxbury* .....	.....	.....	.....	.....	.....	.....	.....	.....
Stoddard	1	3	.....	.....	.....	22	20	20.66
Sullivan	1	5	.....	3	.....	29	26	27.20
Surry	1	3	.....	2	.....	29	12	23.50
Swanzy	1	11	4	2	.....	33	24	31.42
Troy	1	8	8	.....	.....	36	24	32.50
Walpole	1	15	12	1	.....	34	32	33.80
Westmoreland	1	8	.....	1	.....	32	10	26.50
Winchester	1	15	9	3	.....	36	10	27.20
Total	23	182	101	31	.....	.....	.....	27.12

* No school, children conveyed to other towns.

† Pupils transported for remainder of year.

TABLE No. II.—CHESHIRE COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Alstead.....	9	1	...	10	\$4,385	\$360
Chesterfield.....	7	...	...	9	5,000	600
Dublin.....	5	...	...	5	3,000	300
Fitzwilliam.....	8	...	...	10	8,500	.....
Gilsum.....	5	...	...	6	3,200	20
Harrisville.....	3	...	...	4	3,000	100
Hinsdale.....	5	...	...	13	11,700	1,300
Jaffrey.....	13	...	...	17	15,000	350
Keene.....	17	...	...	46	140,000	1,500
Marlborough.....	4	...	...	9	7,000	200
Marlow.....	6	...	...	7	2,000	150
Nelson.....	3	...	...	3	3,500	100
Richmond.....	5	...	...	5	1,500	200
Rindge.....	8	...	...	9	6,700	246
Roxbury.....	3	...	...	3	500	150
Stoddard.....	3	...	...	3	1,500	50
Sullivan.....	5	...	...	5	2,400	60
Surry.....	4	...	...	4	1,200	25
Swanzey.....	9	...	...	13	10,800	300
Troy.....	4	...	...	8	13,000	100
Walpole.....	12	2	1	24	25,000	500
Westmoreland.....	11	3	1	12	5,000	150
Winchester.....	15	...	...	25	14,500	800
Total.....	164	6	2	250	\$288,385	\$7,561

TABLE No. III.—CHESHIRE COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Alstead.....	74	72	74	73	14	126	7				115	104	90	.....	2
Chesterfield....	69	72	89	79	15	144	9		5		137	122	88	.....
Dublin.....	38	30	38	30	...	60	8		2	1	60	54	90	.....	3
Fitzwilliam.....	115	93	118	97	11	197	7		2		179	166	92	.....
Gilsum.....	40	53	47	59	10	93	3		1	1	80	72	90	.....
Harrisville.....	45	57	59	71	6	119	5		3		97	90	82	.....
Hinsdale.....	169	209	185	241	46	349	31	2			355	319	89	.....
Jaffrey.....	205	202	201	203	28	360	16				279	261	82	.....
Keene.....	820	889	756	865	160	1,268	193	46	9*		1,464	1,362	92	250	33
Marlborough....	145	149	156	157	35	269	9		1	1	248	243	97	.....
Marlow.....	55	57	57	52	6	101	2				79	69	87	.....
Nelson.....	16	13	16	13	3	25	1		2		26	24	90	.....
Richmond.....	53	39	65	48	10	97	6		3		90	82	90	.....
Rindge.....	66	67	80	78	3	153	2				104	87	82	.....
Roxbury.....	6	2												.....
Stoddard.....	36	30	36	38	5	66	3				54	49	89	.....
Sullivan.....	35	37	42	35	5	67	5				68	63	92	.....
Surry.....	23	23	23	23	4	41	1			4	44	37	84	.....
Swanzey.....	120	153	159	191	39	301	10		13	1	305	273	89	.....
Troy.....	126	138	137	151	8	273	7		4		234	208	88	.....	2
Walpole.....	330	324	290	292	82	494	6				512	469	91	.....
Westmoreland..	105	92	97	86	13	155	15		2		127	118	92	.....
Winchester.....	221	186	249	214	46	396	21				378	338	94	.....
Total.....	2,912	2,987	2,974	3,096	549	5,154	367	48	47	8	5,035	4,610	91	251	40

* City District attending Union District high school.

TABLE No. IV.—CHESHIRE COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Alstead			8	\$26.13	2	2	6	2	...
Chesterfield			15	28.75			2	2	1
Dublin			5	34.00	1				
Fitzwilliam			9	30.66		4	2	2	
Gilsum			4	29.00		3	1		
Harrisville			4	34.00	1			2	
Hinsdale	1	\$44.44	9	31.60			1		
Jaffrey	1	28.00	10	32.33	1	7	2		
Keene	1	88.88	31	32.33	3	1			
Marlborough			7	33.75			4	2	
Marlow			4	27.50					
Nelson			12	28.00					
Richmond	1	28.00	5	28.00	2	3			
Rindge	2	33.00	5	30.00	3	1			1
Roxbury									
Stoddard			3	29.18		1	1		
Sullivan			5	26.00	1	1	2		
Surry			3	26.00	1	1	2	2	
Swansey	1	49.00	10	31.40		3	1	1	
Troy			8	35.50	2	4	1	1	1
Walpole	2	50.00	14	35.28			6	5	
Westmoreland	3	26.00	5	27.33	4	4	1	1	
Winchester	1	40.00	13	28.42	5	2	1		2
Total	13	\$43.04	189	\$30.23	26	37	33	20	5

TABLE No. V.—CHESHIRE COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Alstead	\$1,045.00	\$346.00	\$100.00	\$79.56	\$179.24		\$130.85	\$0.50	\$1,881.15
Chesterfield	1,250.00	804.46		84.15			198.05		2,336.66
Dublin	1,165.00	400.00	202.00	43.86	100.00	\$100.00	92.20		2,103.06
Fitzwilliam	1,005.00	1,324.00		119.34		470.74	126.00	20.46	3,065.54
Gilsum	645.00	216.00	100.00	63.24	18.00		64.25		1,106.49
Harrisville	725.00	480.00		84.66	11.57				1,301.23
Hinsdale	2,020.00	4,741.24		214.71			241.00	36.00	7,252.95
Jaffrey	2,035.00	1,300.00	200.00	189.00			157.40	14.50	3,895.90
Keene	14,620.00	9,965.00	2,500.00	772.65			934.36	6,378.09	35,170.10
Marlborough	1,500.00	1,405.00	250.00	151.98	353.36	166.66	120.42	32.40	3,979.82
Marlow	730.00	370.00	71.08	61.50	87.15		50.40	31.05	1,401.18
Nelson	285.00			22.95			49.80		357.75
Richmond	445.00	425.00	125.00	55.08		129.19			1,179.27
Rindge	1,230.00	324.00	191.32	81.60			128.57		1,955.49
Roxbury	165.00								165.00
Stoddard	390.00	150.00		30.60					570.60
Sullivan	305.00	234.00		44.88		167.37	45.60	55.80	852.65
Surry	370.00			27.54			63.00	20.00	480.54
Swanzy	1,715.00	1,042.00	250.00	162.69			263.23		3,432.92
Troy	1,030.00	1,425.00	300.00	142.80	24.00	546.23	155.18	1.75	3,624.96
Walpole	3,330.00	5,570.00	600.00	298.35			266.24	99.56	10,164.15
Westmoreland	1,035.00	400.00	446.81	93.84	185.59		95.70	5.00	2,261.94
Winchester	2,530.00	3,444.00	600.00	216.75			262.87		7,053.62
Total	\$39,570.00	\$34,365.70	\$5,936.21	\$3,041.73	\$958.91	\$1,580.19	\$3,445.12	\$6,695.11	\$95,592.97

TABLE No. VI.—CHESHIRE COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Alstead.....	\$120.54	\$60.00	\$180.54	\$1,516.50	.....	\$58.00	\$6.00	\$261.72	\$2,022.76
Chesterfield.....	100.05	24.85	124.90	1,681.50	.....	95.00	.....	564.80	2,466.20
Dublin.....	59.50	22.17	81.67	1,190.00	\$300.00	64.70	.....	97.69	1,734.06
Fitzwilliam.....	212.37	41.61	253.38	2,023.00	333.33	75.00	1.25	493.45	3,134.41
Gilsum.....	68.58	9.72	78.30	851.05	.....	50.00	5.15	125.05	1,109.55
Harrisville.....	148.56	75.75	224.31	1,043.00	.....	.....	10.00	203.20	1,480.51
Hinsdale.....	615.52	205.54	821.06	5,096.00	.....	225.00	10.00	1,626.43	7,778.49
Jaffrey.....	127.09	72.91	200.00	3,375.00	.....	46.80	.....	960.00	4,581.80
Keene.....	2,500.00	599.08	3,099.08	17,088.81	1,200.00	240.00	.....	4,632.52	26,260.41
Marlborough.....	135.34	67.67	203.01	2,566.18	166.66	45.00	10.00	747.93	3,738.78
Marlow.....	71.08	55.68	126.76	816.90	.....	62.00	.....	287.94	1,293.60
Nelson.....	.....	50.00	50.00	301.00	.....	20.00	.....	25.00	396.00
Richmond.....	45.10	23.83	68.93	703.50	.....	71.00	.....	272.82	1,116.25
Rindge.....	110.64	72.58	183.22	1,371.00	.....	63.45	.....	75.77	1,693.44
Roxbury.....	.....	.....	.....	7.00	.....	16.00	1.50	92.85	117.35
Stoddard.....	.....	46.78	46.78	454.50	.....	33.00	.....	79.64	613.92
Sullivan.....	28.20	31.17	59.37	893.00	.....	49.00	.....	88.21	1,089.58
Surry.....	14.07	34.30	48.37	412.00	.....	32.00	.....	35.50	527.87
Swanzy.....	181.06	102.61	283.67	2,788.20	.....	150.00	.....	613.56	3,835.43
Troy.....	269.18	91.35	360.53	2,352.49	333.33	115.00	5.85	699.10	3,866.21
Walpole.....	400.49	323.00	723.49	5,360.91	.....	175.00	30.00	3,073.33	9,362.73
Westmoreland..	396.81	50.00	446.81	1,351.50	.....	84.78	.....	292.73	2,175.82
Winchester.....	478.13	140.53	618.66	4,635.50	.....	372.50	15.00	690.54	6,332.20
Total.....	\$6,082.31	\$2,200.53	\$8,282.84	\$57,878.45	\$2,333.32	\$2,143.23	\$94.75	\$16,044.78	\$86,777.37

TABLE No. VI.—*Continued.*—CHESHIRE COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Alstead.....			\$49.94	\$2,022.76	\$2,072.70	.0042	\$15.67	\$1.56
Chesterfield.....				2,466.20	2,466.20	.0037	13.79	.90
Dublin.....				1,734.06	1,734.06	.0023	28.89	1.51
Fitzwilliam.....		\$455.00	185.47	3,184.41	3,824.88	.0048	18.74	1.35
Gilsum.....				1,109.55	1,109.55	.0046	10.47	.82
Harrisville.....		115.80	138.35	1,480.51	1,734.66	.0047	14.42	2.30
Hinsdale.....			1,002.35	7,778.49	8,780.84	.0086	20.13	2.31
Jaffrey.....				4,581.80	4,581.80	.0040	14.36	.49
Keene.....	\$1,625.00	2,912.00	779.00	26,260.41	31,576.41	.0054	18.60	2.12
Marlborough.....			125.00	3,738.78	3,863.78	.0057	16.30	.82
Marlow.....			68.80	1,293.60	1,362.40	.0053	17.24	1.60
Nelson.....				396.00	396.00	.0052	14.00	1.02
Richmond.....			34.61	1,116.25	1,150.86	.0036	11.55	.76
Rindge.....				1,693.44	1,693.44	.0038	15.41	1.74
Roxbury.....				117.35	117.35	.0022	.....	.....
Stoddard.....			408.91	613.92	1,022.83	.0059	18.94	.86
Sullivan.....			60.39	1,089.58	1,149.97	.0099	15.61	.87
Surry.....				527.87	527.87	.0026	11.99	1.00
Swanzy.....			366.18	3,835.43	4,201.61	.0054	11.73	.92
Troy.....				3,866.21	3,866.21	.0047	16.47	1.53
Walpole.....	7,943.50	1,125.35	447.60	9,362.73	18,879.18	.0070	13.15	1.41
Westmoreland.....	2,600.00		50.00	2,175.82	4,825.82	.0046	16.45	3.80
Winchester.....		480.00	.....	6,332.20	6,812.20	.0056	14.88	1.63
Total.....	\$12,168.50	\$5,088.15	\$3,716.60	\$86,777.37	\$107,750.62	.0049	\$18.98	\$1.64

TABLE No. I.—COOS COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Berlin	1	21	20	.....	.....	38	38	38.00
Carroll	1	7	.....	1	.....	30	30	30.00
Clarksville	1	5	.....	1	.....	22	18	20.00
Colebrook	2	16	4	3	.....	36	25	28.68
Columbia	1	10	.....	5	.....	30	21	25.30
Dalton	1	6	.....	6	.....	25	24	24.83
Dummer	1	5	.....	2	1	28	10	21.20
Errol	1	3	.....	.....	.....	28	22	23.33
Gorham	1	8	5	2	.....	35	20	31.87
Jefferson	1	9	.....	2	1	30	30	30.00
Lancaster	2	18	7	2	1	36	28	30.83
Milan	1	9	4	.....	.....	28	24	26.87
Northumberland	1	10	4	2	2	37	22	29.60
Pittsburg	1	8	.....	8	.....	28	20	25.25
Randolph	1	2	.....	2	.....	25	24	24.50
Shelburne	1	3	.....	1	2	27	22	26.33
Stark	1	8	2	2	.....	29	23	26.25
Stewartstown	2	12	.....	3	.....	35	21	25.58
Stratford	1	8	8	1	.....	37	24	35.62
Wentworth's Location	1	1	.....	1	.....	24	24	24.00
Whitefield	2	14	8	3	1	36	10	30.00
Total	25	183	62	47	8	.....	.....	27.52

TABLE No. II.—COOS COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Berlin.....	6	.....	.....	22	\$39,500	\$500
Carroll.....	6	.....	.....	7	5,750	180
Clarksville.....	5	.....	.....	5	1,500	50
Colebrook.....	14	.....	.....	19	12,500	500
Columbia.....	10	.....	.....	10	2,349	500
Dalton.....	6	.....	.....	6	3,000	130
Dummer.....	5	.....	.....	6	2,250	.....
Errol.....	3	.....	.....	4	3,000	50
Gorham.....	4	.....	.....	12	15,000	150
Jefferson.....	9	.....	.....	11	9,500	500
Lancaster.....	13	.....	.....	15	21,000	400
Milan.....	7	.....	.....	9	6,000	100
Northumberland.....	8	.....	.....	11	8,000	75
Pittsburg.....	8	.....	.....	9	3,750	400
Randolph.....	2	.....	.....	2	1,000	50
Shelburne.....	4	.....	.....	4	1,500	100
Stark.....	7	.....	.....	8	4,000	150
Stewartstown.....	13	1	.....	14	5,000	300
Stratford.....	11	2	.....	14	7,000	350
Wentworth's Location.....	1	.....	.....	1	500	15
Whitefield.....	8	.....	.....	16	12,000	600
Total	150	3	.....	204	\$164,099	\$5,100

TABLE No. III.—COOS COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Berlin.....	1,177	1,184	612	556	140	983	43	.....	.....	.....	813	733	90	1,130	11
Carroll.....	64	65	69	64	14	116	3	.....	.....	1	116	87	75	.....	.....
Clarksville.....	47	30	47	42	7	73	9	.....	.....	.....	70	56	79	.....	.....
Colebrook.....	194	207	176	256	32	346	54	.....	.....	.....	376	326	86	.....	.....
Columbia.....	97	83	97	81	14	151	13	.....	.....	.....	132	109	81	.....	.....
Dalton.....	61	72	61	67	13	113	2	.....	7	.....	97	85	87	.....	.....
Dummer.....	30	35	30	35	3	55	7	.....	.....	.....	62	50	79	.....	.....
Erroll.....	19	17	26	25	.....	46	5	.....	.....	.....	45	40	88	.....	.....
Gorham.....	154	191	166	225	29	338	24	.....	.....	.....	308	264	85	2	1
Jefferson.....	125	119	125	121	9	231	6	.....	.....	.....	225	194	86	.....	3
Lancaster.....	251	261	348	344	49	602	41	7	.....	.....	555	501	90	.....	.....
Milan.....	123	154	114	149	20	227	16	.....	.....	.....	198	156	78	.....	.....
Northumberland.	181	221	181	221	51	341	10	.....	.....	1	330	297	90	.....	.....
Pittsburg.....	70	56	83	86	31	133	10	.....	.....	.....	121	105	80	2	1
Randolph.....	12	13	12	13	3	21	1	.....	.....	.....	25	18	72	.....	.....
Shelburne.....	24	25	31	24	2	50	3	.....	1	.....	47	34	72	6	.....
Stark.....	81	75	83	80	20	136	7	.....	.....	.....	128	110	86	.....	.....
Stewartstown.....	159	90	131	98	15	205	9	.....	.....	.....	229	206	85	.....	.....
Stratford.....	185	148	175	126	.....	295	6	.....	.....	.....	285	232	81	.....	.....
Whitefield.....	203	219	228	218	63	322	61	6	.....	.....	380	324	85	.....	2
Wentworth's Loc'n	11	7	10	8	5	.....	13	.....	.....	.....	01	7	75	.....	.....
Total.....	3,268	3,272	2,810	2,839	520	4,786	343	13	10	2	4,552	3,934	86	1,141	18

TABLE No. IV.—COOS COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Berlin	2	\$58.00	19	\$40.37	1	4	8	6	2
Carroll	1	32.00	6	27.99	4				
Clarksville			5	15.75	3	10		1	
Colebrook			16	23.50	5	4	5	2	1
Columbia	1	16.00	9	15.73	1	9			
Dalton			6	22.24	4	8	1		
Dummer			5	26.17	1			1	
Errol			3	13.50					1
Gorham			8	33.00			1		
Jefferson			9	28.00	1	2	2	1	
Lancaster	1	83.33	18	33.50	1	6	7		
Milan	2	30.00	9	29.33		2	4	5	
Northumberland			11	39.33			1	1	2
Pittsburg	4	30.00	5	22.85	5	4			1
Randolph			2	28.00					
Shelburne	1	22.00	2	23.00	1	2	1		
Stark			8	24.21	1	2	1		
Stewartstown	2	28.50	10	16.00	2	11			1
Stratford	2	51.00	7	32.00		2	4	4	
Wentworth's Location			1	23.00		1			
Whitefield	1	88.89	14	30.86	3	7	1		2
Total	17	\$43.97	173	\$26.11	33	74	36	21	10

TABLE No. V.—COOS COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Berlin	\$4,810.00	\$8,228.00		\$457.32			\$307.00	\$2,987.81	\$16,790.13
Carroll	630.00	300.00		68.85		\$236.33	81.00		1,316.18
Clarksville	255.00		\$50.00	42.33		103.92	52.20		503.45
Colebrook	1,700.00	1,700.00	300.00	227.46		718.34	129.60	844.95	5,620.35
Columbia	480.00	474.00	147.70	79.56		242.81			1,424.07
Dalton	325.00	150.00	225.00	61.20		206.70	78.73	20.00	1,066.63
Dummer	245.00	600.00		35.19		66.16			946.35
Errol	260.00	88.00		25.50		41.26			414.76
Gorham	1,065.00	3,722.00		184.62		977.29	99.83	473.22	6,521.96
Jefferson	615.00	1,262.00	250.00	128.01		454.31	179.59	349.97	3,238.88
Lancaster	3,525.00	4,534.70	900.00	337.50	\$219.00		183.80	168.95	9,868.95
Milan	600.00	850.00	200.00	134.13		349.41	108.90	25.67	2,268.11
Northumberland	1,385.00	1,700.00	400.00	191.25	17.00	823.97	57.95	33.00	4,608.17
Pittsburg	705.00	800.00		93.84		144.29			1,743.13
Randolph	130.00	175.00		11.73		18.88	10.80		346.41
Shelburne	275.00	2.52	37.73	29.58		77.92	37.90		460.65
Stark	520.00	200.00		88.74	16.92	255.78	71.15	120.02	1,272.61
Stewartstown	700.00	1,000.00		117.30		460.68	67.92		2,345.90
Stratford	870.00	1,150.00	350.00	159.12		587.51		718.94	3,835.57
Wentworth's L'n	115.00	42.00		8.16		631.56			165.16
Whitefield	1,565.00	1,900.00	400.00	241.74			165.00	15.00	4,918.30
Total	\$20,775.00	\$28,878.22	\$3,260.43	\$2,723.13	\$252.92	\$6,397.12	\$1,631.37	\$5,757.53	\$69,675.72

TABLE No. VI.—COOS COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Berlin	\$730.52	\$373.28	\$1,103.80	\$9,765.23	.....	\$200.00	.....	\$3,375.99	\$14,445.02
Carroll	71.88	45.00	116.88	1,415.00	.....	50.00	\$2.00	169.68	1,753.56
Clarksville	75.36	2.00	77.36	499.75	.....	15.00	.....	67.85	659.96
Colebrook	221.66	78.34	300.00	3,578.50	.....	83.00	.....	649.07	4,610.57
Columbia	173.34	5.00	178.34	994.50	.....	109.00	.....	.....	1,281.84
Dalton	13.20	20.87	34.07	828.50	.....	53.00	.....	67.83	983.40
Dummer	9.51	7.90	17.41	629.75	.....	30.00	.....	.....	677.16
Errol	12.00	2.00	14.00	687.65	.....	12.00	.....	.....	713.65
Gorham	230.34	30.88	261.22	3,266.46	.....	109.00	.....	839.69	4,476.37
Jefferson	218.00	44.00	262.00	2,502.00	.....	85.00	8.00	165.00	3,022.00
Lancaster	580.12	402.22	982.34	7,585.35	.....	231.00	.....	710.09	9,508.78
Milan	206.45	.....	206.45	1,749.00	.....	.....	.....	153.52	2,108.97
North'mberland	319.67	.....	319.67	3,347.34	.....	40.00	10.00	261.28	3,978.29
Pittsburg	101.17	12.40	113.57	1,265.50	.....	76.00	.....	145.89	1,600.96
Randolph	12.79	.52	13.31	350.00	.....	10.76	.....	28.93	403.00
Shelburne	37.73	4.00	41.73	453.00	.....	20.00	2.00	47.50	564.23
Stark	101.00	60.90	161.90	1,226.90	.....	62.00	.....	112.89	1,563.69
Stewartstown	200.00	65.16	265.16	953.75	.....	139.00	12.00	438.63	1,808.54
Stratford	200.00	150.00	350.00	2,653.00	.....	65.00	.....	730.83	3,798.83
Wentworth's L'n .....	.....	.....	.....	138.00	.....	2.00	.....	10.61	150.61
Whitefield	186.23	131.77	318.06	4,935.75	.....	75.00	48.00	969.29	6,346.10
Total	\$3,701.03	\$1,436.24	\$5,137.27	\$48,824.93	.....	\$1,466.76	\$82.00	\$8,944.57	\$64,455.53

TABLE No. VI.—*Continued.*—COOS COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Berlin		\$1,000.00	\$3,325.11	\$14,445.02	\$18,770.13	.0060	\$21.85	\$1.60
Carroll			29.28	1,753.56	1,782.84	.0072	17.16	1.80
Clarksville			314.00	659.96	973.96	.0065	13.91	1.07
Colebrook		151.50	64.27	4,610.57	4,826.34	.0030	11.43	.93
Columbia			89.54	1,281.84	1,371.38	.0042	10.39	1.35
Dalton		175.73	6.00	983.40	1,165.13	.0045	9.99	.35
Dummer				677.16	677.16	.0040	10.92	.28
Errol				713.65	713.65	.0040	6.66	.13
Gorham		1,830.34	150.44	4,476.37	6,457.15	.0052	13.68	.84
Jefferson			350.00	3,022.00	3,372.00	.0063	14.95	1.16
Lancaster			421.03	9,508.78	9,929.81	.0064	16.60	1.77
Milan			150.00	2,108.97	2,258.97	.0046	10.63	1.04
Northumberland	\$100.00		1,141.13	3,978.29	5,219.42	.0067	15.51	.97
Pittsburg			200.00	1,600.96	1,800.96	.0052	13.67	.93
Randolph				403.00	403.00	.0036	16.12	.53
Shelburne				564.23	564.23	.0049	12.44	.99
Stark			90.80	1,563.69	1,654.49	.0032	12.04	1.26
Stewartstown	125.00		200.00	1,808.54	2,133.54	.0050	8.77	.87
Stratford			250.00	3,798.83	4,048.83	.0070	13.55	1.40
Wentworths L'n		2.60		150.61	153.21	.0023	12.78	.....
Whitefield				6,346.10	6,346.10	.0034	16.70	.83
Total	\$225.00	\$3,160.17	\$6,781.60	\$64,455.53	\$74,622.30	.0049	\$16.34	\$1.13

TABLE No. I.—GRAFTON COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Alexandria	1	9	.....	5	1	28	20	24.00
Ashland	2	8	5	1	.....	36	22	30.75
Bath	2	6	.....	4	1	30	20	27.66
Benton	1	2	.....	1	.....	30	30	30.00
Bethlehem	2	11	3	2	.....	34	10	30.00
Bridgewater	1	6	.....	6	.....	23	20	20.00
Bristol	2	10	5	2	2	36	24	30.70
Campton	1	10	3	3	.....	30	20	23.66
Canaan	2	13	3	2	.....	34	15	24.15
Dorchester	1	5	.....	3	.....	24	13	21.60
Easton	1	3	.....	1	.....	20	10	15.66
Ellsworth	1	2	.....	1	1	20	20	20.00
Enfield	2	11	3	1	.....	35	25	30.00
Franconia	1	3	.....	.....	.....	36	36	36.00
Grafton	1	10	.....	2	1	26	22	24.20
Groton	1	5	.....	3	.....	28	28	28.00
Hanover	2	14	4	3	2	36	14	28.25
Haverhill	2	21	11	3	1	36	8	31.43
Hebron	1	2	.....	.....	.....	34	34	34.00
Holderness	1	7	1	2	2	26	23	25.00
Landaff	1	5	.....	1	1	31	10	24.60
Lebanon	3	26	17	4	1	36	10	32.38
Lincoln	1	3	2	.....	.....	36	20	27.33
Lisbon	3	12	4	2	3	36	10	31.66
Littleton	2	23	13	5	.....	36	20	31.43
Livermore* .....	.....	.....	.....	.....	.....	.....	.....	.....
Lyman	1	4	.....	2	.....	30	27	29.27
Lyme	1	11	2	2	1	27	27	27.00
Monroe	1	5	.....	.....	.....	30	30	30.00
Orange	1	4	.....	3	.....	21	11	20.00
Orford	1	8	5	2	.....	33	21	30.75
Piermont	1	10	.....	6	.....	30	20	26.70
Plymouth	1	10	4	4	.....	37	33	36.00
Rumney	1	6	2	1	.....	31	29	30.40
Thornton	1	7	.....	5	2	27	17	24.85
Warren	1	9	2	3	1	29	19	21.22
Waterville* .....	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth	1	7	.....	2	.....	32	10	25.42
Woodstock	1	4	.....	1	1	24	10	21.25
Total	50	312	86	88	21	.....	.....	27.71

* No schools.

TABLE No. II.—GRAFTON COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Alexandria.....	9			9	\$3,000	\$1,000
Ashland.....	4			8	20,000	500
Bath.....	7	1		7	4,600	350
Benton.....	2			2		
Bethlehem.....	10			13	12,000	1,500
Bridgewater.....	6			6	2,400	
Bristol.....	7			11	6,000	300
Campton.....	12			12	6,300	50
Canaan.....	13			13	7,500	200
Dorchester.....	5			5	1,200	65
Easton.....	3			3	1,000	50
Ellsworth.....	2			2	500	25
Enfield.....	11			14	6,400	1,000
Franconia.....	3			5	200	75
Grafton.....	10			10	4,375	50
Groton.....	5			5	2,000	75
Hanover.....	13			20	2,600	1,000
Haverhill.....	12			23	25,380	1,100
Hebron.....	2			2	1,000	50
Holderness.....	9			9	2,500	200
Landaff.....	6			6	2,400	40
Lebanon.....	15			32	37,500	250
Lincoln.....	2			3	3,500	200
Lisbon.....	11	1		17	35,000	500
Littleton.....	14			26	60,750	550
Livermore*.....	7			7		
Lyman.....	7	1		7	1,500	75
Lyme.....	11			12	2,700	
Monroe.....	7	1		8		
Orange.....	5			5	1,000	
Orford.....	6			8	8,400	800
Piermont.....	10	1		11	4,200	200
Plymouth.....	7			16	9,200	1,500
Runney.....	5			6	4,000	250
Thornton.....	9			9	4,000	200
Warren.....	8			9	2,500	200
Waterville*.....						
Wentworth.....	9	1		9	1,375	125
Woodstock.....	4			4	2,550	100
Total.....	281	6		370	\$269,530	\$12,580

* No schools.

TABLE No. III.—GRAFTON COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Alexandria.....	67	68	70	72	13	124	5	.....	.....	4	111	96	86	.....	.....
Ashland.....	114	122	110	119	7	212	10	.....	8	9	183	164	29	.....	.....
Bath.....	116	87	116	87	17	173	8	.....	3	.....	130	117	72	.....	.....
Benton.....	31	20	31	20	2	47	2	.....	.....	.....	30	20	81	.....	.....
Bethlehem.....	156	172	161	164	21	278	26	7	6	.....	286	281	94	.....	.....
Bridgewater.....	23	20	23	22	4	39	2	.....	7	.....	45	44	98	.....	.....
Bristol.....	119	112	139	92	16	205	10	.....	2	13	199	192	96	.....	21
Campton.....	104	73	104	73	14	154	9	.....	.....	15	124	110	89	.....	10
Canaan.....	121	112	141	122	22	237	4	.....	.....	5	198	172	86	.....	.....
Dorchester.....	38	27	39	30	5	63	1	.....	.....	2	67	57	86	.....	.....
Easton.....	22	17	27	17	2	42	.....	.....	.....	.....	45	38	84	.....	.....
Ellsworth.....	13	10	14	9	.....	23	.....	.....	.....	.....	20	17	93	.....	.....
Enfield.....	152	167	168	194	40	318	4	.....	1	1	237	198	86	.....	.....
Franconia.....	45	40	48	42	9	81	.....	.....	1	1	82	70	85	.....	.....
Grafton.....	80	76	95	92	12	154	21	.....	.....	.....	146	122	83	1	1
Groton.....	31	28	43	44	6	73	8	.....	.....	8	41	40	97	.....	.....
Hanover.....	164	166	169	182	32	297	22	6	2	.....	335	325	97	.....	.....
Haverhill.....	296	350	349	377	51	631	44	7	.....	.....	547	480	88	1	.....
Hebron.....	9	21	16	26	4	36	2	.....	.....	.....	29	25	86	.....	.....
Holderness.....	37	41	67	65	13	103	16	8	4	.....	115	95	90	.....	.....
Landaff.....	45	36	45	42	4	79	4	.....	4	2	65	53	82	.....	.....
Lebanon.....	411	415	503	492	70	858	67	2	13	.....	825	730	88	.....	.....
Lincoln.....	83	53	77	51	10	118	.....	.....	.....	.....	81	55	67	.....	.....
Lisbon.....	154	176	214	207	14	356	51	23	2	.....	319	309	96	.....	.....
Littleton.....	425	443	342	364	42	615	49	14	.....	.....	572	503	87	.....	.....
Livermore*.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyman.....	43	37	39	39	5	72	1	.....	3	.....	59	49	83	.....	.....
Lyne.....	132	107	132	107	20	209	10	.....	.....	4	185	167	95	.....	.....
Monroe.....	55	60	39	46	10	75	.....	.....	.....	.....	49	41	83	.....	.....
Orange.....	20	24	22	29	4	44	3	.....	.....	.....	40	36	90	.....	.....
Orford.....	105	111	114	113	18	204	5	.....	1	4	214	201	90	.....	.....
Piermont.....	61	53	69	73	14	117	11	.....	.....	3	123	106	86	.....	.....
Plymouth.....	141	127	206	180	15	316	55	27	.....	.....	318	278	88	.....	6
Rumney.....	69	68	87	76	9	141	13	.....	1	2	120	105	87	.....	.....
Thornton.....	40	43	60	75	26	103	6	.....	3	.....	112	78	69	.....	.....
Warren.....	64	72	80	86	16	147	3	.....	1	1	132	108	81	.....	.....
Waterville*.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth.....	61	52	64	64	12	111	5	.....	2	.....	101	83	81	.....	.....
Woodstock.....	73	38	73	42	11	101	3	.....	2	.....	89	74	83	.....	.....
Total.....	3,719	3,644	4,096	3,935	590	6,961	480	86	65	78	6,374	5,639	88	2	38

* No schools.

TABLE No. IV.—GRAFTON COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Alexandria			9	\$24.00		4			
Ashland			8	35.00		3	4	1	
Bath			6	20.00	2				1
Benton			2	28.00		1		1	
Bethlehem			11	28.72			6	4	1
Bridgewater	1	\$24.00	3	22.00	2	3	1		
Bristol	1	22.00	9	32.50	2	6	1	5	
Campton			10	21.33	1	4	2		
Canaan	2	44.00	11	25.83	4	5	1		1
Dorchester			5	22.50		4			1
Easton			3	20.89	1	2			
Ellsworth			2	18.36	1	1		1	
Enfield	1	60.00	10	26.80	1	9	1	1	
Franconia			3	26.00			3		
Grafton			10	23.96	1	12	2		
Groton			5	21.80	1	5			
Hanover	1	88.88	15	32.29	1	2	5		3
Haverhill			21	34.17	3		8	10	1
Hebron	1	24.00	1	24.00	1				1
Holderness			8	24.00		6	2		
Landaff	2	25.50	3	21.33	5				
Lebanon	4	40.00	22	34.88		8	1		2
Lincoln			3	28.64					
Lisbon	1	28.00	12	29.26	2		2		
Littleton			13	32.17	2				
Livermore*									
Lyman	1	24.00	4	23.83	1	2			
Lyme	1	20.00	11	23.80	3				
Monroe			5	28.00	1	4			
Orange			4	20.62	1	4			
Orford	2	42.00	6	34.00	1	1		5	2
Piermont	1	20.00	9	23.60		8	1		
Plymouth			10	46.00	4	6	5	2	5
Runney	1	12.00	6	20.89	1	7	1		
Thornton	1	26.00	6	25.00	5	7		3	
Warren			9	26.00	5	9		3	
Waterville*									
Wentworth			8	22.80	1	6			
Woodstock			4	32.00		2	1		
Total	21	\$33.35	287	\$25.27	53	131	47	37	18

* No schools.

TABLE No. V.—GRAFTON COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Deg. licenses.	Amount from all other sources.	Total.
Alexandria..	\$495.00	\$400.00	.....	\$72.93	\$18.00	\$188.58	\$126.50	\$31.50	\$1,332.51
Ashland.....	1,250.00	1,375.00	.....	104.04	.....	.....	149.75	.....	2,878.79
Bath.....	895.00	1,000.00	.....	102.00	13.45	.....	63.00	.....	2,073.45
Benton.....	215.00	200.00	.....	19.38	.....	32.47	27.00	.....	493.85
Bethlehem..	1,525.00	1,600.00	.....	163.20	.....	528.12	149.43	125.25	4,091.00
Bridgewater	270.00	150.00	.....	23.00	.....	68.47	48.00	2.75	562.22
Bristol.....	2,055.00	1,300.00	\$310.70	131.07	.....	.....	172.80	57.25	4,026.82
Campton.....	795.00	256.00	150.00	86.19	.....	185.43	95.00	.....	1,567.62
Canaan.....	1,300.00	1,150.00	192.08	125.97	40.00	.....	95.93	48.93	2,952.91
Dorchester..	185.00	150.00	.....	56.61	.....	236.33	22.61	21.66	672.21
Easton.....	280.00	.....	.....	.....	.....	.....	23.40	15.00	318.40
Ellsworth...	55.00	50.00	25.00	.....	.....	.....	13.80	.....	152.80
Enfield.....	1,665.00	400.00	.....	179.01	45.18	.....	211.50	.....	2,500.69
Fraconia...	800.00	300.00	120.21	34.68	29.00	.....	.....	35.00	1,318.89
Grafton.....	730.00	190.00	150.00	85.17	.....	190.76	82.80	106.24	1,628.97
Groton.....	210.00	200.00	.....	38.76	.....	93.37	48.20	14.75	605.08
Hanover.....	2,535.00	2,200.00	279.00	181.56	132.00	.....	247.50	.....	5,575.06
Haverhill...	2,770.00	6,761.20	750.00	354.45	189.70	.....	131.05	230.75	11,187.15
Hebron.....	230.00	.....	30.71	21.93	.....	38.89	30.40	4.00	355.93
Holderness..	505.00	700.00	100.00	48.96	.....	153.88	95.30	57.75	1,665.89
Landaff.....	510.00	200.00	.....	53.55	45.00	.....	54.63	25.00	888.18
Lebanon.....	5,680.00	\$280.00	1,067.25	490.62	.....	.....	444.62	1,242.36	17,204.85
Lincoln.....	490.00	150.00	.....	42.33	.....	.....	.....	.....	682.33
Lisbon.....	2,355.00	3,714.00	.....	207.06	.....	.....	233.28	462.75	6,972.00
Littleton...	3,750.00	9,500.00	800.00	418.20	.....	.....	271.60	411.75	15,151.55
Livermore*..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyman.....	340.00	100.00	.....	51.51	.....	100.77	64.20	131.45	787.93
Lyme.....	1,010.00	988.00	34.20	125.46	161.03	.....	140.05	.....	2,458.74
Monroe.....	555.00	250.00	.....	61.20	.....	.....	54.50	.....	920.70
Orange.....	130.00	144.00	.....	23.97	.....	100.04	.....	.....	398.01
Orford.....	740.00	1,100.00	224.25	110.16	.....	338.56	.....	646.37	3,159.34
Piermont...	635.00	600.00	.....	78.03	284.86	140.77	39.60	83.00	1,861.26
Plymouth...	2,520.00	2,850.00	550.00	191.76	.....	.....	143.95	40.00	6,295.71
Rumney.....	820.00	500.00	150.00	80.58	.....	.....	99.60	4.00	1,654.18
Thorton.....	340.00	400.00	137.00	59.16	.....	251.21	88.00	.....	1,275.37
Warren.....	705.00	.....	.....	71.91	226.54	.....	117.00	.....	1,120.45
Waterville*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth..	520.00	400.00	100.00	63.75	12.50	150.22	93.00	.....	1,339.47
Woodstock..	395.00	200.00	.....	52.00	.....	113.07	45.00	8.00	813.07
Total.....	\$40,260.00	\$47,767.20	\$5,170.40	\$4,010.16	\$1,197.26	\$2,915.94	\$3,723.00	\$3,895.51	\$108,939.47

* No schools.

TABLE No. VI.—GRAFTON COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Alexandria..	\$67.05	\$12.02	\$79.07	\$1,208.00	.....	\$90.00	\$6.00	\$40.92	\$1,423.99
Ashland.....	156.47	145.88	302.35	2,083.00	\$125	.....	50.00	386.39	2,946.74
Bath.....	30.87	28.50	59.37	860.00	.....	63.50	.....	519.47	1,502.34
Benton.....	37.71	17.61	55.32	420.00	.....	19.99	2.00	5.00	502.31
Bethlehem.....	350.00	100.00	450.00	3,165.25	.....	125.50	.....	205.25	3,946.00
Bridgewater..	46.62	14.39	61.01	636.25	.....	37.50	.....	.....	794.76
Bristol.....	195.63	115.07	310.70	2,530.00	.....	95.00	12.00	1,072.04	4,079.74
Campton.....	100.00	47.50	147.50	1,500.00	.....	65.00	.....	.....	1,712.50
Canaan.....	163.77	28.31	192.08	2,173.00	.....	84.00	27.20	256.12	2,732.40
Dorchester....	6.00	15.62	21.62	532.98	.....	40.39	3.00	95.90	693.89
Easton.....	37.24	20.77	58.01	245.55	.....	13.50	.....	21.65	338.71
Ellsworth.....	1.80	2.25	4.05	183.60	.....	2.00	.....	20.49	210.14
Enfield.....	151.00	12.27	163.27	2,754.00	.....	103.33	19.00	290.70	3,330.30
Franconia.....	75.00	45.25	120.25	820.00	.....	20.00	.....	640.45	1,600.70
Grafton.....	68.00	8.10	76.10	1,449.50	.....	77.35	17.00	53.58	1,673.53
Groton.....	23.37	16.30	39.67	651.00	.....	31.00	3.00	132.77	857.44
Hanover.....	224.50	55.00	279.50	4,249.62	.....	250.00	19.00	207.20	5,005.32
Haverhill....	420.24	407.50	827.74	6,638.60	.....	150.00	23.00	2,276.70	9,916.04
Hebron.....	27.96	2.75	30.71	372.00	.....	17.95	3.25	18.30	442.21
Holderness....	53.00	63.00	116.00	1,050.00	.....	71.00	10.00	.....	1,256.00
Landaff.....	58.45	22.62	81.07	647.00	.....	48.50	.....	187.55	964.12
Lebanon.....	312.23	41.14	353.37	10,452.52	.....	380.50	25.00	2,967.87	14,179.26
Lincoln.....	107.30	114.19	221.49	608.00	.....	9.00	.....	.....	938.49
Lisbon.....	473.57	236.78	710.35	5,471.50	.....	106.50	10.00	1,144.74	7,443.09
Littleton.....	1,015.27	124.14	1,139.41	7,691.04	.....	199.85	27.50	2,439.82	11,497.62
Livermore*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyman.....	2.68	25.91	28.59	661.47	.....	28.00	.....	110.89	828.95
Lyme.....	241.53	95.30	336.83	1,769.00	.....	75.00	7.50	134.35	2,322.68
Monroe.....	25.00	5.00	30.00	750.00	.....	47.00	.....	250.00	1,077.00
Orange.....	46.24	4.00	50.24	379.90	.....	21.37	.....	47.30	498.81
Orford.....	192.39	38.10	230.49	1,867.00	.....	111.00	.....	938.20	3,146.69
Piermont.....	.....	179.75	179.75	1,691.00	.....	101.00	4.50	154.95	2,131.20
Plymouth.....	200.00	422.03	622.03	4,983.20	.....	150.00	7.00	624.54	6,386.77
Rumney.....	96.86	44.46	141.32	1,025.30	.....	111.08	5.00	102.82	1,385.52
Thornton.....	87.00	50.00	137.00	621.00	.....	55.82	1.50	178.72	904.24
Warren.....	157.91	53.21	211.12	1,260.00	.....	70.00	.....	136.98	1,678.10
Waterville*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth....	83.56	16.44	100.00	1,207.00	.....	35.00	.....	176.25	1,518.25
Woodstock....	121.00	10.00	131.00	648.00	.....	22.00	.....	15.00	816.00
Total.....	\$5,457.22	\$2,641.16	\$8,098.38	\$75,384.48	\$125	\$2,928.63	\$282.45	\$15,852.91	\$102,671.85

* No schools.

TABLE No. VI.—*Continued.*—GRAFTON COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Alexandria..				\$1,423.99	\$1,423.99	.0069	\$14.24	\$0.79
Ashland.....		\$449.92	\$75.00	2,946.74	3,471.66	.0068	14.40	1.65
Bath.....			100.00	1,502.34	1,602.34	.0022	15.86	1.01
Benton.....			75.00	502.31	577.31	.0050	19.17	1.84
Bethlehem.....		500.00	400.00	3,946.00	4,846.00	.0026	15.22	1.59
Bridgewater.....			75.00	794.76	869.76	.0054	19.53	1.39
Bristol.....			79.23	4,079.74	4,158.97	.0052	18.94	1.56
Campton.....			75.00	1,712.50	1,787.50	.0035	14.41	1.10
Canaan.....		104.62	502.22	2,732.40	3,339.24	.0021	16.86	.96
Dorchester.....			41.80	693.89	735.69	.0037	10.84	.31
Easton.....				338.71	338.71	.0036	7.02	1.29
Ellsworth.....			25.00	210.14	235.14	.0062	10.23	1.06
Enfield.....				3,330.30	3,330.30	.0059	14.09	.78
Franconia.....			19.50	1,600.70	1,620.20	.0026	19.75	1.46
Grafton.....	\$102.78		171.67	1,673.53	1,947.98	.0070	12.25	.51
Groton.....			27.93	857.44	885.37	.0076	25.00	1.21
Hanover.....			828.57	5,005.32	5,833.89	.0055	14.54	.86
Haverhill.....		1,800.00	369.10	9,916.04	12,085.14	.0092	18.80	1.51
Hebron.....				442.21	442.21	.0046	14.62	1.06
Holderness.....			200.00	1,256.00	1,456.00	.0041	12.67	1.01
Landaff.....				964.12	964.12	.0039	10.77	1.28
Lebanon.....	175.00	1,710.00	315.24	14,179.26	16,380.50	.0062	17.56	.42
Lincoln.....			50.00	838.49	888.49	.0023	10.53	2.73
Lisbon.....		1,960.00		7,443.09	9,403.09	.0054	23.26	2.22
Littleton.....		2,342.49	557.15	11,497.62	14,397.26	.0059	18.10	1.77
Livermore*..								
Lyman.....				828.95	828.95	.0025	13.44	.48
Lyme.....			15.00	2,322.68	2,337.68	.0048	11.63	1.80
Munroe.....		47.09	5.00	1,077.00	1,129.09	.0026	21.49	.61
Orange.....			47.85	498.81	546.66	.0080	12.48	1.25
Orford.....			33.60	3,146.69	3,180.29	.0049	14.85	1.12
Piermont.....			200.00	2,131.20	2,331.20	.0044	17.69	1.46
Plymouth.....			215.38	6,386.77	6,602.15	.0062	18.79	1.95
Rumney.....			221.95	1,385.52	1,607.47	.0060	12.54	1.18
Thornton.....			120.00	994.24	1,114.24	.0043	8.87	.77
Warren.....				1,678.10	1,678.10	.0036	12.68	1.59
Waterville*..								
Wentworth.....	250.00		41.26	1,518.25	1,809.51	.0065	15.34	.98
Woodstock..			75.00	816.00	891.00	.0047	9.83	1.35
Total.....	\$527.78	\$8,914.12	\$4,962.45	\$102,671.85	\$117,076.20	.0049	\$16.86	\$1.26

* No schools.

TABLE No. I.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Amherst.....	1	10	.....	8	1	33	33	33.00
Antrim.....	1	9	5	.....	.....	36	29	31.33
Bedford.....	1	10	.....	12	2	31	*11	30.10
Bennington.....	1	3	2	.....	.....	32	24	29.33
Brookline.....	1	4	2	1	.....	30	30	30.00
Deering.....	1	6	.....	1	1	23	11	21.00
Francestown.....	1	5	2	1	.....	30	30	30.00
Goffstown.....	2	15	4	4	4	36	32	33.66
Greenfield.....	1	5	2	3	.....	33	24	26.80
Greenville.....	1	4	4	.....	.....	36	36	36.00
Hancock.....	1	6	.....	.....	.....	30	23	24.16
Hillsborough.....	2	18	5	7	4	36	26	30.13
Hollis.....	1	6	2	2	.....	30	20	26.00
Hudson.....	1	6	5	1	.....	29	29	29.00
Litchfield.....	1	3	.....	1	.....	31	31	31.00
Lyndeborough.....	1	6	.....	2	2	29	8	22.13
Manchester.....	1	112	107	1	.....	37	37	37.00
Mason.....	1	5	.....	2	1	34	32	33.40
Merrimack.....	1	11	4	11	.....	33	30	32.00
Milford.....	1	17	12	.....	.....	36	36	36.00
Mont Vernon.....	1	4	.....	3	1	34	24	30.00
Nashua.....	1	73	67	2	.....	36	36	36.00
New Boston.....	1	9	2	3	.....	30	20	28.88
New Ipswich.....	1	6	.....	.....	.....	36	36	36.00
Pelham.....	1	5	.....	.....	.....	33	33	33.00
Peterborough.....	1	12	12	2	.....	36	22	32.33
Sharon.....	1	2	.....	2	.....	22	22	22.00
Temple.....	1	3	.....	3	.....	32	10	24.06
Weare.....	1	16	4	5	2	32	10	25.06
Wilton.....	1	11	5	.....	2	36	20	30.72
Windsor.....	1	2	.....	.....	2	23	20	21.50
Total.....	33	404	246	69	22	.....	.....	29.72

*One term, school given up.

TABLE No. II.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture and sites.	Estimated value of apparatus.
Amherst.....	10	.....	.....	11	\$14,250.00	\$450.00
Antrim.....	7	.....	.....	12	15,175.00	250.00
Bedford.....	10	.....	.....	10	10,000.00	500.00
Bennington.....	3	.....	.....	4	3,900.00	30.00
Brookline.....	4	.....	.....	4	5,500.00	300.00
Deering.....	9	1	.....	9	3,500.00	100.00
Francestown.....	8	1	.....	9	4,000.00	175.00
Goffstown.....	11	.....	.....	16	17,800.00	250.00
Greenfield.....	4	.....	.....	5	5,000.00	150.00
Greenville.....	3	.....	.....	6	4,800.00	300.00
Hancock.....	8	.....	.....	9	5,000.00	500.00
Hillsborough.....	17	1	.....	23	34,000.00	1,000.00
Hollis.....	7	.....	.....	10	4,800.00	350.00
Hudson.....	7	.....	.....	11	15,000.00	300.00
Litchfield.....	4	.....	.....	4	1,500.00	.....
Lyndeborough.....	9	1	.....	9	3,500.00	20.00
Manchester.....	24	.....	.....	138	739,056.00	45,000.00
Mason.....	6	.....	.....	6	2,500.00	.....
Merrimack.....	12	3	.....	14	.....	.....
Milford.....	10	.....	.....	24	70,000.00	500.00
Mont Vernon.....	4	.....	.....	4	18,000.00	50.00
Nashua.....	19	.....	.....	82	308,433.40	25,000.00
New Boston.....	10	.....	.....	12	7,600.00	125.00
New Ipswich.....	7	.....	.....	8	4,500.00	225.00
Pelham.....	6	.....	.....	6	6,023.80	1,200.00
Peterborough.....	6	.....	.....	15	25,200.00	1,300.00
Sharon.....	2	.....	.....	2	500.00	10.00
Temple.....	6	.....	.....	6	3,000.00	.....
Weare.....	15	.....	.....	19	19,700.00	250.00
Wilton.....	10	.....	.....	15	30,000.00	.....
Windsor.....	1	.....	.....	2	.....	.....
Total.....	259	7	.....	505	\$1,382,238.20	\$78,335.00

TABLE No. III.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Amherst.....	89	79	97	94	22	165	4	12	.....	.....	149	137	72	.....	.....
Antrim.....	118	109	156	138	11	250	33	15	.....	.....	279	251	89	.....	1
Bedford.....	93	82	101	95	19	174	3	.....	1	.....	146	125	86	5	.....
Bennington.....	49	54	53	49	5	94	3	14	.....	.....	86	78	90	.....	.....
Brookline.....	45	30	49	30	2	77	.....	6	.....	.....	79	67	92	.....	1
Deering.....	43	43	43	42	11	74	.....	2	.....	.....	66	63	95	.....	.....
Francestown.....	57	54	57	53	24	86	.....	.....	29	.....	86	78	89	.....	1
Goffstown.....	151	145	191	189	40	320	20	6	.....	.....	299	258	86	5	.....
Greenfield.....	83	68	65	54	8	111	.....	8	.....	.....	85	75	88	5	13
Greenville.....	150	176	70	79	18	131	.....	1	1	.....	120	116	89	150	.....
Hancock.....	76	59	78	59	6	127	4	4	.....	.....	102	83	80	.....	.....
Hillsborough.....	204	198	202	197	19	370	10	11	.....	.....	379	350	92	.....	.....
Hollis.....	82	56	102	73	10	143	22	.....	.....	.....	148	131	89	.....	.....
Hudson.....	115	98	103	106	23	186	.....	11	3	.....	176	153	86	.....	.....
Litchfield.....	23	23	23	23	2	44	.....	.....	3	.....	36	33	89	.....	.....
Lyndeborough.....	48	37	49	38	5	80	2	5	1	.....	73	59	75	.....	.....
Manchester.....	4,754	4,650	2,894	2,790	565	4,815	304	15	.....	.....	4,876	4,480	91	4,561	.....
Mason.....	48	48	48	48	13	83	.....	.....	1	.....	64	51	79	.....	.....
Merrimack.....	101	106	101	106	24	177	6	.....	1	26	152	126	82	.....	.....
Milford.....	343	331	407	365	66	642	64	31	.....	.....	634	591	93	.....	.....
Mont Vernon.....	12	30	14	25	5	34	.....	2	.....	.....	35	32	90	.....	.....
Nashua.....	2,316	2,522	1,744	1,800	192	3,246	106	18	.....	.....	2,571	2,335	90	1,600	.....
New Boston.....	94	90	104	107	8	178	25	.....	1	.....	174	149	81	.....	.....
New Ipswich.....	78	55	88	64	24	128	.....	.....	.....	.....	105	91	87	25	20
Pelham.....	64	78	65	68	17	111	5	.....	.....	2	85	73	85	.....	1
Peterborough.....	215	217	210	231	35	382	24	6	.....	.....	370	323	89	.....	2
Sharon.....	11	10	11	10	1	20	.....	.....	.....	.....	20	18	94	.....	.....
Temple.....	28	27	28	27	3	52	.....	.....	.....	.....	53	49	92	2	.....
Weare.....	102	101	115	132	30	212	5	.....	6	3	207	191	91	.....	.....
Wilton.....	189	185	189	185	10	342	22	3	.....	.....	316	285	90	2	.....
Windsor.....	3	4	3	6	1	8	.....	.....	.....	.....	9	9	98	.....	.....
Total.....	9,784	9,765	7,460	7,283	1,219	12,862	662	105	75	75	11,980	10,760	89	6,355	38

TABLE No. IV.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Amherst.....			11	\$33.00	1		1		1
Antrim.....			9	30.84		1	1		1
Bedford.....			10	27.83	2	3		1	
Bennington.....	1	\$40.00	2	29.33			1		
Brookline.....			4	31.00	1		2		
Deering.....	1	23.00	6	24.75		2			
Francestown.....			5	26.40					
Goffstown.....	2	27.33	15	32.00	4		9		
Greenfield.....			5	29.60					
Greenville.....			4	35.50	1		1		1
Hancock.....	1	40.00	6	29.33		2	3		
Hillsborough.....	1	20.00	17	29.70	3	4	4	1	
Hollis.....			6	30.00	1		2		
Hudson.....			6	32.87					1
Litchfield.....			3	28.00	1	1	1	1	1
Lyndeborough.....			6	27.30	1				
Manchester.....	12	123.75	110	52.28	8		11	82	3
Mason.....			5	29.33	2		2	1	
Merrimack.....			11	28.90	1	1	1		1
Milford.....			18	38.84	2		4	2	4
Mont Vernon.....			4	26.00	2				
Nashua.....	1	87.50	72	45.22			10	37	10
New Boston.....	1	32.00	8	28.00					
New Ipswich.....			6	32.00			1		
Pelham.....			5	32.00	1		1	1	
Peterborough.....	2	40.00	11	31.92	2		5		
Sharon.....			2	24.00	1		1		
Temple.....			3	28.00	1			1	1
Weare.....	2	30.00	14	27.22	4	4	2		3
Wilton.....			11	32.36	1		2	1	1
Windsor.....	1	18.00	1	18.00	3	1			
Total.....	25	\$43.78	396	\$30.69	43	20	66	139	28

TABLE No. V.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Amherst.....	\$1,570	\$1,200.00		\$88.23	\$580.66		\$114.00		\$3,552.89
Antrim.....	1,485	2,018.00	\$250.00	149.94	55.00		89.40	\$132.88	4,180.22
Bedford.....	1,605	663.55	135.06	103.53			207.20	1.00	2,715.34
Bennington.....	550	489.00	90.36	55.08		\$119.83	118.80	1.26	1,424.33
Brookline.....	655	100.00	50.00	35.70			90.00		930.70
Deering.....	485	125.00		54.00	120.00	139.55	128.70	4.00	1,056.25
Fracestown.....	915		53.16	58.14			87.46	12.00	1,125.76
Goffstown.....	3,255	1,500.00	359.49	203.49	21.67		300.38	148.08	5,788.11
Greenfield.....	640	200.00	75.00	57.12			117.60	65.00	1,154.72
Greenville.....	1,350	380.00		71.40			117.10		1,918.50
Hancock.....	795	416.00	150.00	66.30			116.00		1,543.30
Hillsborough.....	2,700	2,850.00		212.16			271.95	135.25	6,169.36
Hollis.....	1,230	438.32	292.87	85.68	595.00				2,641.87
Hudson.....	1,610	470.00	266.39	110.67			207.05	55.40	2,719.51
Litchfield.....	570			24.99			58.20		653.19
Lyndeborough.....	590	400.00		49.50	58.60		95.10		1,193.20
Manchester.....	75,140	49,935.00		2,642.00				4,178.87	131,895.87
Mason.....	580			44.88	711.32		122.11	95.95	1,554.26
Merrimack.....	1,685	450.00		98.94	442.94		139.20	94.00	2,910.08
Milford.....	4,670	6,896.00		372.30			354.45	798.31	13,091.06
Mont Vernon.....	570	316.00		23.00			80.70	114.15	1,103.85
Nashua.....	30,405	28,041.45		1,869.66			1,270.40	336.00	61,922.51
New Boston.....	1,550	260.00	676.69	94.86	700.00		181.34		3,462.89
New Ipswich.....	1,040	252.00		84.15	469.75		148.80		1,994.70
Pelham.....	955	200.00	125.00	67.83			201.34		1,549.17
Peterborough.....	3,320	1,566.00	550.00	213.69			316.07	140.25	6,106.01
Sharon.....	125	100.00	12.00	10.71		35.02			282.73
Temple.....	355	174.00		27.54			65.00		621.54
Weare.....	1,815	800.00		136.17	225.97		164.77	113.62	3,255.53
Wilton.....	2,620	2,356.00		197.37	430.00			59.20	5,662.57
Windsor.....	60	125.00		4.08		18.29	1.80		209.17
Total.....	\$144,895	\$102,721.32	\$3,086.02	\$7,313.11	\$4,410.91	\$312.69	\$5,164.92	\$6,485.22	\$274,389.19

TABLE No. VI.—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Amherst	\$193.00	\$185.15	\$378.15	\$2,903.00	.....	\$177.00	.....	\$315.95	\$3,774.10
Antrim		250.00	250.00	3,072.59	.....	225.00	.....	337.37	3,884.96
Bedford	133.61	34.30	167.91	1,992.50	.....	139.00	\$5.00	383.46	2,687.87
Bennington	57.12	33.24	90.36	917.50	.....	48.00	5.00	198.20	1,259.06
Brookline	40.00	20.00	60.00	775.00	.....	40.00	.....	160.00	1,035.00
Deering	72.00	10.00	82.00	767.50	.....	68.00	.....	197.90	1,115.40
Francestown	20.00	33.16	53.16	921.80	.....	77.10	.....	264.46	1,316.52
Goffstown	279.28	80.21	359.49	4,573.90	.....	151.00	8.00	345.11	5,437.59
Greenfield		172.15	172.15	1,006.00	.....	65.00	.....	125.87	1,369.02
Greenville	47.99	100.00	147.99	1,326.50	.....	.....	.....	428.93	1,903.42
Hancock	32.26	57.28	89.54	1,092.25	.....	96.50	6.00	228.74	1,513.03
Hillsborough	523.49	152.61	676.10	5,136.40	.....	265.75	15.00	1,402.55	7,495.80
Hollis	253.73	39.14	292.87	2,040.00	.....	120.00	.....	410.33	2,863.20
Hudson	170.48	95.91	266.39	1,435.50	.....	125.00	.....	1,135.91	2,962.80
Litchfield	15.00	21.00	36.00	600.00	.....	25.00	.....	57.87	718.87
Lyndeborough	10.00	44.56	54.56	976.40	.....	71.75	4.00	190.59	1,297.30
Manchester	3,750.00	1,250.00	5,000.00	87,992.38	\$2,300.00	370.00	\$50.00	29,375.72	125,888.10
Mason		63.24	63.24	1,253.00	.....	91.50	.....	551.53	1,959.27
Merrimack	53.36	43.67	97.03	2,533.00	.....	154.00	3.00	254.31	3,041.34
Milford	696.51	783.00	1,479.51	9,478.67	.....	250.00	10.00	2,782.82	14,001.00
Mont Vernon		18.12	18.12	828.00	.....	50.00	.....	243.10	1,139.22
Nashua	3,049.36	2,934.75	5,984.11	44,500.55	1,800.00	100.00	800.00	13,019.45	66,204.11
New Boston	265.07	111.62	376.69	2,302.00	.....	150.00	.....	562.12	3,390.81
New Ipswich	40.00	25.00	65.00	1,828.00	.....	100.00	5.00	318.35	2,316.35
Pelham	31.96	102.26	134.22	1,320.00	.....	150.00	.....	167.92	1,772.14
Peterborough	390.59	105.79	496.38	4,954.42	.....	100.00	8.62	1,152.09	6,711.51
Sharon	10.50	2.00	12.50	264.00	.....	8.00	.....	13.00	297.50
Temple	30.00	20.00	50.00	550.00	.....	30.00	.....	.....	630.00
Weare	272.75	27.25	300.00	2,849.00	.....	155.75	12.00	374.80	3,691.55
Wilton	548.95	118.99	667.94	4,390.10	.....	125.00	.....	182.38	5,365.42
Windsor	1.76	1.88	3.64	193.50	.....	10.00	.....	2.00	209.14
Total	\$10,988.77	\$6,936.28	\$17,925.05	\$194,773.46	\$4,100.00	\$3,538.44	\$1,731.62	\$55,182.83	\$277,251.40

TABLE No. VI.—*Continued.*—HILLSBOROUGH COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Amherst			\$258.79	\$3,774.10	\$4,032.89	.0050	\$27.07	\$2.53
Antrim	\$100.00		300.00	3,884.96	4,284.96	.0064	15.00	.89
Bedford				2,687.87	2,687.87	.0042	18.37	1.14
Bennington		\$221.67	18.82	1,259.06	1,499.55	.0043	14.86	1.05
Brookline			25.00	1,035.00	1,060.00	.0031	11.53	.75
Deering			132.00	1,115.40	1,247.40	.0037	18.68	1.08
Francestown			45.95	1,316.52	1,362.47	.0038	14.52	.61
Goffstown		250.20	113.09	5,437.59	5,800.88	.0047	17.41	1.20
Greenfield				1,369.02	1,369.02	.0042	12.30	1.02
Greenville			189.58	1,903.42	2,093.00	.0032	16.10	1.13
Hancock			76.79	1,513.03	1,589.82	.0043	15.58	.87
Hillsborough				7,495.80	7,495.80	.0031	17.95	1.78
Hollis				2,863.20	2,863.20	.0040	19.35	1.97
Hudson		336.00	281.85	2,962.80	3,580.65	.0052	18.37	1.59
Litchfield			36.87	718.87	755.74	.0030	18.69	1.00
Lyndeborough				1,297.30	1,297.30	.0041	17.60	.74
Manchester	3,365.77			125,888.10	129,253.87	.0036	24.79	1.02
Mason			100.00	1,959.27	2,059.27	.0035	32.13	.98
Merrimack			103.00	3,041.34	3,144.34	.0042	19.36	.63
Milford				14,001.00	14,001.00	.0068	22.06	2.33
Mont Vernon				1,139.22	1,139.22	.0035	32.54	.51
Nashua			1,799.50	66,204.11	68,003.61	.0040	23.11	1.16
New Boston				3,390.81	3,390.81	.0056	20.25	2.53
New Ipswich				2,316.35	2,316.35	.0046	20.00	.62
Pelham			40.45	1,772.14	1,812.59	.0032	19.00	1.19
Peterborough			78.66	6,711.51	6,790.17	.0047	18.59	1.36
Sharon				297.50	297.50	.0041	17.00	.70
Temple			50.00	630.00	680.00	.0035	12.45	.94
Weare			320.27	3,691.55	4,011.82	.0045	17.50	1.44
Wilton			120.37	5,365.42	5,485.79	.0056	16.73	2.10
Windsor			10.30	209.14	219.44	.0070	22.50	.37
Total	\$3,465.77	\$807.87	\$4,101.29	\$277,251.40	\$285,626.33	.0047	\$23.55	\$1.49

TABLE No. I.—MERRIMACK COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Allenstown.....	1	3	2	..	..	34	34	34.00
Andover.....	1	11	3	4	..	38	29	31.00
Boscawen.....	2	11	4	2	2	36	10	20.81
Bow.....	1	7	..	5	..	27	25	26.71
Bradford.....	2	8	1	3	2	30	27	28.75
Canterbury.....	1	7	..	4	..	33	29	29.57
Chichester.....	1	6	..	3	..	29	28	28.83
Concord.....	3	67	54	5	1	38	25	35.61
Danbury.....	1	8	..	1	1	27	25	26.12
Dunbarton.....	1	4	..	2	..	30	30	30.00
Epsom.....	1	6	..	..	..	29	29	29.00
Franklin.....	1	21	15	4	..	36	23	33.23
Henniker.....	1	8	2	5	1	35	10	28.12
Hill.....	1	5	2	2	..	29	25	26.00
Hooksett.....	1	10	..	3	..	33	33	33.00
Hopkinton.....	1	13	2	7	..	30	27	29.46
Loudon.....	1	10	2	3	1	33	27	30.34
Newbury.....	1	6	..	1	2	22	21	21.60
New London.....	1	6	..	..	2	31	9	27.16
Northfield.....	1	7	..	3	1	26	20	24.28
Pembroke.....	1	9	4	..	..	34	34	34.00
Pittsfield.....	1	11	11	3	1	33	10	31.00
Salisbury.....	1	5	..	..	..	29	26	27.20
Sutton.....	1	8	2	2	1	26	20	23.50
Warner.....	1	15	2	5	4	28	24	27.61
Webster.....	1	7	..	5	1	23	19	21.85
Wilnot.....	1	6	..	2	1	26	23	23.66
Total.....	31	285	106	74	21	.....	.....	28.27

TABLE No. II.—MERRIMACK COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Allenstown.....	2	.....	.....	3	\$9,000	\$2,000
Andover.....	10	.....	.....	11	4,500	350
Boscawen.....	7	.....	.....	11	10,000	1,000
Bow.....	8	.....	.....	8	5,000	200
Bradford.....	9	2	.....	10	2,300	200
Canterbury.....	9	.....	.....	9	4,400	50
Chichester.....	6	.....	.....	6	2,500	100
Concord.....	29	.....	1	90	395,000	25,750
Danbury.....	8	.....	.....	8	4,000	75
Dunbarton.....	10	3	.....	10	2,500	165
Epsom.....	7	.....	.....	7	3,500	50
Franklin.....	10	.....	.....	26	67,500	1,000
Henniker.....	10	1	.....	15	15,000	500
Hill.....	4	.....	.....	5	1,800	250
Hooksett.....	8	.....	.....	10	6,800	200
Hopkinton.....	17	1	.....	17	8,000	80
Loudon.....	11	.....	.....	12	7,000	300
Newbury.....	9	3	.....	9	3,200	150
New London.....	7	.....	.....	7	3,500	125
Northfield.....	8	.....	.....	8	3,200	250
Pembroke.....	7	.....	.....	10	6,500	200
Pittsfield.....	9	.....	.....	13	21,000	300
Salisbury.....	7	.....	.....	7	4,000	.....
Sutton.....	9	.....	.....	10	3,250	300
Warner.....	18	1	1	19	11,000	300
Webster.....	7	.....	.....	7	3,000	50
Wilmot.....	7	1	.....	7	2,500	75
Total.....	253	12	2	355	\$609,950	\$34,020

TABLE No. III.—MERRIMACK COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Allenstown..	179	167	68	36	7	97	...	...	3	1	66	55	91	165	...
Andover.....	114	102	149	129	12	250	16	18	...	...	276	272	98	...	...
Boscawen....	185	155	180	149	17	308	4	...	7	...	241	200	83	...	...
Bow.....	45	50	49	58	22	83	2	...	2	...	75	62	82	...	...
Bradford.....	71	54	84	75	12	137	10	...	2	...	113	101	89	...	...
Canterbury...	85	68	79	64	18	120	5	...	...	...	106	84	80	...	...
Chichester....	50	58	56	62	8	100	10	...	3	1	95	87	91	...	...
Concord.....	1,681	1,677	1,676	1,630	318	2,737	251	27	*15	1	2,915	2,669	91	437	30
Danbury.....	83	68	82	65	11	130	6	...	...	4	138	126	93	...	...
Dunbarton....	38	46	40	46	7	76	3	...	1	4	61	56	90	...	...
Epsom.....	60	45	80	52	13	116	3	...	5	3	105	92	87	...	...
Franklin.....	599	574	416	419	106	675	54	2	...	...	674	621	92	340	†109
Henniker.....	93	83	128	102	14	192	24	6	...	...	195	180	92	...	...
Hill.....	41	40	50	42	9	78	5	...	...	4	74	66	88	...	...
Hooksett.....	201	165	179	181	41	314	5	...	...	...	252	234	88	...	...
Hopkinton ..	110	105	124	106	22	200	8	...	12	...	198	168	86	...	1
Loudon.....	84	67	92	73	28	130	7	...	4	4	127	108	84	...	...
Newbury.....	35	38	34	36	4	66	...	...	6	2	54	45	83	...	3
New London..	46	40	52	57	14	91	4	...	...	21	89	74	83	...	...
Northfield...	55	35	56	46	12	86	4	...	4	...	74	68	89	...	...
Pembroke....	321	300	158	133	36	255	...	...	8	13	206	177	85	240	...
Pittsfield....	229	210	246	254	32	410	58	19	...	...	436	368	84	...	...
Salisbury....	40	40	50	52	6	93	3	...	1	6	82	62	77	...	...
Sutton.....	90	61	73	58	12	114	5	...	...	7	111	101	87	...	...
Warner.....	93	85	106	99	16	186	3	12	...	...	208	185	89	...	...
Webster.....	34	38	42	44	7	75	4	...	2	3	73	63	86	...	...
Wilmot.....	45	37	50	41	6	82	3	...	...	...	78	71	91	...	...
Total.....	3,707	4,417	4,399	4,109	810	7,201	497	84	75	86	7,122	6,395	89	1,182	143

*Penacook district and town district.

†Orphans' Home.

TABLE No. IV.—MERRIMACK COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Allenstown.....	.....	.....	3	\$40.00	.....	.....	3	.....	.....
Andover.....	.....	.....	11	27.90	4	4	3	1	.....
Boscawen.....	.....	.....	11	33.00	2	2	.....	2	.....
Bow.....	.....	.....	7	26.00	6	2	1	.....	.....
Bradford.....	.....	.....	8	24.94	1	7	1	.....	.....
Canterbury.....	.....	.....	7	24.57	3	6	.....	1	.....
Chichester.....	1	\$31.00	5	26.80	2	.....	2	.....	.....
Concord.....	1	99.94	67	48.32	6	17	17	32	9
Danbury.....	.....	.....	8	22.12	2	.....	1	3	.....
Dunbarton.....	.....	.....	4	31.33	2	1	1	1	.....
Epsom.....	1	32.00	8	28.00	.....	.....	.....	.....	.....
Franklin.....	1	80.00	21	35.02	4	.....	6	6	.....
Henniker.....	.....	.....	9	30.57	1	3	2	.....	2
Hill.....	.....	.....	5	28.80	.....	2	.....	.....	.....
Hooksett.....	.....	.....	10	32.00	1	.....	2	2	.....
Hopkinton.....	2	30.00	13	27.25	3	5	3	1	.....
London.....	.....	.....	10	24.00	1	9	2	.....	.....
Newbury.....	.....	.....	6	24.66	2	5	.....	.....	.....
New London.....	.....	.....	6	27.14	.....	2	.....	.....	.....
Northfield.....	.....	.....	7	24.00	1	6	.....	.....	4
Pembroke.....	.....	.....	9	32.88	.....	.....	1	5	.....
Pittsfield.....	1	50.00	9	28.80	1	1	.....	.....	.....
Salisbury.....	.....	.....	5	25.00	1	5	.....	.....	.....
Sutton.....	2	28.00	8	22.57	1	4	3	.....	.....
Warner.....	.....	.....	15	25.15	6	6	.....	.....	.....
Webster.....	.....	.....	7	23.22	1	3	1	.....	.....
Wilmot.....	.....	.....	6	21.66	2	4	.....	.....	.....
Total.....	9	\$50.13	285	\$28.36	53	84	49	54	15

TABLE No. V.—MERRIMACK COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Allenstown	\$1,295.00		\$40.00	\$37.74				\$125.00	\$1,497.74
Andover	1,115.00	\$550.00	219.35	128.01		\$583.14	\$133.60	13.76	2,742.86
Boscawen	1,405.00	1,565.00	280.00	167.28	\$75.00		60.00		3,552.28
Bow	970.00			49.47			175.70	5.06	1,200.17
Bradford	1,130.00	150.00		71.40			169.45	33.60	1,554.45
Canterbury	1,095.00	307.27		77.52			45.99		1,525.78
Chichester	945.00	455.00	166.19	56.61			41.50	22.50	1,686.80
Concord	36,135.00	23,709.99	3,300.08	1,672.29	35.00		1,284.02	4,150.61	70,286.99
Danbury	635.00			68.85		197.55	139.03	10.00	1,050.43
Dunbarton	885.00	300.00	61.09	47.43			90.70	3.10	1,387.32
Epsom	885.00	274.00	195.00	68.85			87.00	155.25	1,665.10
Franklin	7,685.00	7,343.00		435.00				61.00	15,524.00
Henniker	1,870.00	1,300.00		132.60			236.30	90.00	3,628.90
Hill	535.00	600.00		47.43			82.82		1,265.25
Hooksett	1,745.00	1,400.00		154.64					3,299.64
Hopkinton	2,360.00	210.00	252.72	128.52			194.98	1.82	3,148.04
Loudon	1,505.00	325.00		81.60	94.00		63.07		2,068.67
Newbury	685.00		28.01	32.13	35.00		94.50	16.80	891.44
New London	940.00	350.00	95.82	58.65			123.00	111.32	1,678.79
Northfield	1,205.00	200.00	100.00	54.77		57.50	59.25		1,676.52
Pembroke	2,845.00			134.13		225.00			3,204.13
Pittsfield	2,730.00	2,224.00		213.54		225.00	87.25	1,098.21	6,578.00
Salisbury	640.00	300.00	105.11	53.04			97.10	3.20	1,198.45
Sutton	780.00	800.00		68.85	97.50		105.50	26.00	1,877.85
Warner	1,930.00	200.00		128.52			113.94	61.90	2,434.36
Webster	855.00			45.39			39.02		939.41
Wilmot	610.00	268.31		55.59			100.20		1,034.10
Total	\$75,415.00	\$42,831.57	\$4,843.37	\$4,269.85	\$336.50	\$1,288.19	\$3,623.92	\$5,989.07	\$138,597.47

TABLE No. VI.—MERRIMACK COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Allenstown	\$48.80	\$17.33	\$66.13	\$1,020.00		\$90.00		\$298.80	\$1,474.93
Andover	136.11	83.24	219.35	2,111.10		65.00	\$18.00	599.43	3,012.88
Boscawen	117.00	150.48	267.48	2,477.60		96.86	31.85	634.47	3,508.26
Bow	106.00		106.00	1,134.10		89.50		117.57	1,447.17
Bradford	97.15		97.15	1,491.00		37.00	5.00	173.62	1,803.77
Canterbury	51.39	26.65	78.04	1,267.00		75.00	10.00	209.00	1,639.04
Chichester	144.07	22.12	166.19	1,179.00		55.00		129.50	1,529.69
Concord	3,617.61	2,316.44	5,934.05	40,709.40	*\$2,708.33	450.00	428.00	2,741.46	52,971.24
Danbury	76.05	27.02	103.07	1,154.30		60.00	10.00	26.25	1,353.62
Dunbarton		61.09	61.09	940.00		91.64	4.50	364.58	1,461.81
Epsom	167.28	27.62	194.90	1,255.00		50.00		156.37	1,656.27
Franklin	508.75	571.94	1,080.69	11,512.22	350.00	200.00	25.00	1,798.13	14,966.04
Henniker	233.14	103.75	336.89	3,107.66		139.08		692.68	4,276.31
Hill	95.26	20.78	116.04	854.00		65.00	3.50	87.11	1,125.65
Hooksett		107.55	107.55	2,673.00		75.00	30.00	25.00	2,910.55
Hopkinton	184.93	67.79	252.72	2,731.35		191.50	25.30	730.33	3,931.20
Loudon	233.69	35.00	268.69	1,786.00		80.00	5.00	175.63	2,315.32
Newbury	15.43	12.58	28.01	802.00		39.50	3.00	23.40	895.91
New London	62.36	33.44	95.80	1,080.10		75.00	6.00	148.24	1,405.14
Northfield	67.25	7.47	74.72	997.00		50.00	7.50	40.90	1,170.12
Pembroke	269.69	81.00	350.69	2,479.20	450.00	140.00	110.00	724.90	4,254.79
Pittsfield	515.87	148.85	664.72	4,241.28	450.00	150.00		1,475.54	6,981.54
Salisbury	97.99	7.12	105.11	854.20		75.00	12.25	182.45	1,229.01
Sutton	65.00	35.00	100.00	1,176.00		95.00	7.00	173.65	1,551.65
Warner	228.86	60.00	288.86	2,523.25		120.00	7.00	326.75	3,265.86
Webster	46.66	21.34	68.00	888.00		69.00	2.00	109.62	1,136.62
Wilmot	15.08	2.12	17.20	765.50		42.00		20.75	845.45
Total	\$7,201.42	\$4,047.72	\$11,249.14	\$93,200.26	\$3,958.33	\$2,766.08	\$750.90	\$12,186.13	\$124,119.84

* Union District, \$2,500.00
 Penacook District, 208.33

TABLE No. VI.—*Continued.*—MERRIMACK COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Allentown			\$64.01	\$1,474.93	\$1,538.94	.0025	\$21.49	\$1.00
Andover				3,012.88	3,012.88	.0066	10.05	.79
Boscawen		\$62.50	434.83	3,508.26	4,005.59	.0060	13.67	1.11
Bow			31.36	1,447.17	1,478.53	.0048	18.21	1.41
Bradford				1,803.77	1,803.77	.0042	11.16	.63
Canterbury		52.00		1,639.04	1,691.04	.0035	14.73	.74
Chichester			105.79	1,529.69	1,635.48	.0053	16.35	1.66
Concord	\$28,652.34	868.34	4,472.54	52,971.24	86,964.46	.0076	19.70	2.03
Danbury			73.00	1,353.62	1,426.62	.0049	10.97	.78
Dunbarton				1,461.81	1,461.81	.0049	23.82	.99
Epsom			119.66	1,656.27	1,775.93	.0040	15.42	1.85
Franklin	1,062.50			14,066.04	16,028.63	.0050	20.60	1.60
Henniker			151.04	4,276.31	4,427.35	.0063	22.70	1.72
Hill			63.00	1,125.63	1,188.63	.0051	15.92	1.56
Hooksett			200.00	2,910.55	3,110.55	.0050	12.26	.43
Hopkinton			59.75	3,931.20	3,990.95	.0045	20.60	1.29
Loudon			100.00	2,315.32	2,415.32	.0070	17.62	2.11
Newbury				895.91	895.91	.0030	16.16	.52
New London			94.52	1,405.14	1,499.66	.0040	15.06	1.07
Northfield			1.90	1,170.12	1,172.02	.0043	17.35	.98
Pembroke				4,254.79	4,254.79	.0034	18.93	1.70
Pittsfield			262.75	6,981.54	7,244.29	.0052	13.99	1.52
Salisbury				1,229.01	1,229.01	.0034	15.14	1.30
Sutton			300.00	1,551.65	1,851.65	.0055	16.60	.89
Warner			134.75	3,265.86	3,400.61	.0039	18.86	1.40
Webster			70.98	1,136.62	1,207.60	.0026	15.04	.93
Wilnot				845.45	845.45	.0012	10.61	.22
Total	\$29,714.93	\$982.84	\$6,739.88	\$124,119.84	\$161,557.49	.0046	\$18.50	\$1.50

TABLE No. I.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Atkinson	1	5	.....	1	1	26	12	23.20
Auburn	1	6	.....	1	1	29	23	26.30
Brentwood	1	4	.....	.....	1	29	27	27.75
Candia	1	10	.....	2	.....	29	12	25.25
Chester	1	7	.....	1	.....	29	29	29.00
Danville	1	4	2	.....	.....	32	31	31.45
Deerfield	1	11	.....	12	.....	26	22	22.36
Derry	2	12	6	.....	.....	38	32	35.89
East Kingston	1	3	.....	3	.....	40	12	30.66
Epping	1	9	9	1	.....	36	30	33.22
Exeter	1	16	14	1	.....	36	32	35.75
Fremont	1	5	.....	.....	.....	25	25	25.00
Greenland	1	3	.....	.....	.....	36	36	36.00
Hampstead	1	6	6	.....	.....	32	30	31.50
Hampton	1	4	.....	.....	.....	35	35	35.00
Hampton Falls	1	3	.....	.....	.....	31	31	31.00
Kensington	1	3	.....	3	.....	32	32	32.00
Kingston	1	5	.....	.....	.....	38	37	37.20
Londonderry	1	10	.....	4	.....	29	27	27.20
Newcastle	1	2	.....	.....	.....	36	36	36.00
Newfields	1	4	3	1	.....	31	31	31.00
Newington	1	2	.....	.....	.....	37	37	37.00
Newmarket	1	13	13	.....	.....	36	*21	36.00
Newton	1	4	.....	.....	.....	32	32	32.00
North Hampton	1	4	4	1	.....	36	36	36.00
Northwood	1	8	4	.....	.....	31	22	28.75
Nottingham	1	9	.....	5	1	29	9	26.77
Plaistow	1	6	2	.....	.....	36	36	36.00
Portsmouth	1	38	35	.....	.....	38	38	38.00
Raymond	1	9	3	1	1	35	13	25.88
Rye	1	4	.....	.....	.....	35	35	35.00
Salem	1	10	10	2	.....	34	32	33.40
Sandown	1	4	.....	2	.....	23	12	20.25
Seabrook	1	8	.....	.....	.....	36	34	35.50
South Hampton	1	4	.....	1	1	30	20	21.00
Stratham	1	4	.....	1	.....	35	34	34.75
Windham	1	6	.....	5	.....	35	25	27.35
Total	38	265	111	38	6	.....	.....	30.13

* Opened in winter. Scholars all had thirty-six weeks.

TABLE No. II.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus.
Atkinson.....	5	.....	.....	5	\$2,600.00	\$50.00
Auburn.....	8	.....	.....	8	2,700.00	150.00
Brentwood.....	4	.....	.....	4	2,500.00	90.00
Candia.....	11	.....	.....	11	4,000.00	200.00
Chester.....	7	.....	.....	8	3,000.00	150.00
Danville.....	3	.....	.....	4	2,200.00	200.00
Deerfield.....	13	.....	.....	13	5,200.00	500.00
Derry.....	10	.....	.....	14	23,000.00	.....
East Kingston.....	4	.....	.....	4	4,200.00	200.00
Epping.....	9	.....	.....	11	9,000.00	.....
Exeter.....	14	.....	.....	20	26,000.00	1,000.00
Fremont.....	5	.....	.....	5	3,000.00	150.00
Greenland.....	4	.....	.....	4	5,000.00	75.00
Hampstead.....	7	.....	.....	7	7,900.00	200.00
Hampton.....	4	.....	.....	6	10,000.00	300.00
Hampton Falls.....	4	.....	.....	4	3,000.00	1,000.00
Kensington.....	3	.....	.....	3	1,500.00	100.00
Kingston.....	5	.....	.....	5	3,500.00	.....
Londonderry.....	9	.....	.....	9	6,800.00	400.00
Newcastle.....	2	.....	.....	2	1,500.00	150.00
Newfields.....	3	.....	.....	4	4,000.00	250.00
Newington.....	1	.....	.....	2	1,900.00	50.00
Newmarket.....	8	.....	.....	15	26,500.00	500.00
Newton.....	4	.....	.....	5	2,625.00	115.50
North Hampton.....	2	.....	.....	4	6,000.00	200.00
Northwood.....	6	.....	.....	8	3,900.00	175.00
Nottingham.....	11	.....	.....	11	5,000.00	250.00
Plaistow.....	5	.....	.....	6	6,000.00	250.00
Portsmouth.....	11	.....	.....	47	100,000.00	1,600.00
Raymond.....	9	.....	.....	11	4,700.00	.....
Rye.....	4	.....	.....	4	12,000.00	500.00
Salem.....	9	.....	.....	11	13,200.00	500.00
Sandown.....	4	.....	.....	4	1,500.00	.....
Seabrook.....	6	.....	.....	8	6,000.00	300.00
South Hampton.....	4	.....	.....	4	4,000.00	.....
Stratham.....	4	.....	.....	4	5,800.00	.....
Windham.....	7	.....	.....	7	5,000.00	100.00
Total.....	229	.....	.....	302	\$334,725.00	\$9,705.50

TABLE No. III.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Atkinson.....	39	35	36	33	11	57	1	...	...	9	52	47	90	...	...
Anburn.....	43	50	62	64	19	104	3	...	3	3	89	75	84	...	...
Brentwood.....	49	48	52	51	8	95	...	...	...	7	84	66	78	...	12
Candia.....	59	80	89	109	12	175	11	...	...	1	153	131	85	...	...
Chester.....	57	83	65	95	26	128	6	...	...	8	124	107	86	...	...
Danville.....	47	47	48	57	6	96	3	...	...	8	105	83	86	...	...
Deerfield.....	121	130	121	130	19	232	...	...	1	7	183	149	81	...	...
Derry.....	307	230	303	227	40	480	10	...	...	61	384	345	89	...	...
East Kingston...	33	26	29	28	11	45	1	...	...	5	56	46	81	...	...
Epping.....	129	113	132	118	9	238	3	...	...	4	224	193	86	...	4
Exeter.....	482	447	560	318	109	756	13	...	...	...	716	650	90	2	152
Fremont.....	67	81	58	74	22	110	...	...	7	8	96	86	96	...	...
Greenland.....	57	40	53	43	5	88	3	...	...	1	86	71	82	...	...
Hampstead.....	64	79	63	75	7	130	1	...	...	...	125	112	89	...	...
Hampton.....	88	98	107	125	13	193	26	...	...	...	189	169	89	...	...
Hampton Falls..	34	25	23	17	...	40	...	...	...	...	48	39	81	...	...
Kensington.....	42	36	35	35	7	63	...	...	4	...	53	43	81	...	...
Kingston.....	99	88	99	88	31	156	...	...	...	26	147	125	84	...	...
Londonderry....	128	123	152	132	26	254	4	...	2	6	225	186	82	2	...
Newcastle.....	29	17	29	17	1	44	1	...	1	...	34	30	85	...	...
Newfields.....	59	45	55	44	15	82	2	...	5	...	98	76	77	...	...
Newington.....	34	27	32	23	7	47	1	...	17	...	39	32	81	2	...
Newmarket.....	333	382	276	281	63	492	2	9	...	...	512	461	90	130	...
Newton.....	92	73	92	73	6	155	4	...	...	4	132	116	87	...	...
North Hampton..	58	41	52	41	5	85	3	...	6	17	83	69	81	...	...
Northwood.....	113	129	113	129	33	206	3	...	...	39	189	160	81	...	41
Nottingham.....	64	70	50	66	16	96	4	...	...	2	94	73	76	...	...
Plaistow.....	111	120	96	105	20	181	...	...	...	4	155	128	82	5	14
Portsmouth.....	817	953	813	831	125	1,361	158	39	...	...	1,540	1,371	89	360	...
Raymond.....	72	78	95	89	17	165	2	...	...	7	196	160	84	...	...
Rye.....	72	73	74	72	5	140	1	...	19	...	129	106	81	...	...
Salem.....	147	143	149	133	20	259	3	...	1	7	241	215	89	...	...
Sandown.....	32	31	36	27	2	59	2	...	...	2	57	47	82	...	...
Seabrook.....	140	147	147	136	21	257	5	...	...	...	228	174	76	...	3
South Hampton..	28	15	28	17	5	40	...	...	2	...	44	35	84	...	...
Stratham.....	66	57	63	60	7	114	2	...	...	6	107	88	82	...	...
Windham.....	47	48	55	43	9	80	...	...	1	6	72	67	92	...	...
Total.....	4,257	4,308	4,342	4,006	758	7,312	278	48	71	246	7,089	6,031	85	503	226

TABLE No. IV.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Atkinson.....			5	\$28.80	3		2		2
Auburn.....			6	25.00	1	3		2	
Brentwood.....			4	30.00					
Candia.....	1	\$25.00	9	26.61		8	1		
Chester.....			7	28.38	1	9	1		
Danville.....			4	30.00	2	1			
Deerfield.....	1	28.00	10	26.00	1	4		1	
Derry.....			12	34.10	1	2	2		
East Kingston...			3	27.00	1	1			2
Epping.....			9	32.00	2	1	3		1
Exeter.....	2	133.33	16	41.22			5	4	2
Fremont.....			5	28.00				1	1
Greenland.....			3	32.00	1		2	1	
Hampstead.....			6	34.00	2	1	4	1	
Hampton.....			4	34.50		1	1		
Hampton Falls..			3	30.00					
Kensington.....	1	26.00	2	26.00			1		
Kingston.....			5	30.53	1				
Londonderry.....	5	32.33	9	32.18	3	9	1	2	3
Newcastle.....			2	30.00					
Newfields.....			4	36.00			2	2	
Newington.....			2	30.00				1	
Newmarket.....			13	35.54	3		3	2	1
Newton.....			4	29.25			1	1	
North Hampton.	1	48.00	3	37.00				1	1
Northwood.....	2	32.50	6	28.33	2	1			
Nottingham.....			9	27.00	2	9			
Plaistow.....			6	30.00				2	
Portsmouth.....	2	100.00	35	33.93	2		4	22	1
Raymond.....	1	36.00	8	27.00		7	1		1
Rye.....			4	42.00			1	1	
Salem.....	1	40.00	9	31.00	1	1	2		
Sandown.....			4	28.00	1	1			
Seabrook.....	2	31.00	6	28.66	1	1	1		
South Hampton.			4	26.00	1	1	2	1	
Stratham.....			4	33.00	3		1		
Windham.....			6	29.00	1				
Total.....	19	\$48.37	251	\$39.02	36	62	41	47	15

TABLE No. V.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Atkinson	\$645.00	\$300.00	\$104.30	\$37.44	.....	.....	\$106.30	\$6.00	\$1,199.04
Auburn	790.00	200.00	217.67	55.08	.....	.....	121.39	.....	1,384.14
Brentwood	640.00	.....	.....	54.06	.....	.....	91.60	.....	785.66
Candia	1,070.00	.....	.....	99.96	.....	.....	133.38	121.43	1,424.77
Chester	905.00	400.00	149.04	69.36	.....	.....	155.01	32.30	1,710.71
Danville	385.00	400.00	.....	62.22	.....	\$245.66	79.62	.....	1,172.50
Deerfield	1,215.00	167.00	200.00	115.26	\$28.00	.....	158.65	12.00	1,895.91
Derry	2,985.00	2,500.00	.....	286.11	132.96	.....	334.89	40.25	6,279.21
East Kingston..	455.00	.....	37.00	28.05	219.93	.....	69.00	75.91	884.89
Epping	1,550.00	1,050.00	150.00	145.86	.....	265.00	152.00	50.00	3,362.86
Exeter	7,325.00	2,186.00	650.00	424.32	.....	.....	.....	77.89	10,663.21
Fremont	545.00	500.00	.....	71.91	.....	.....	50.00	11.78	1,178.69
Greenland	940.00	600.00	124.31	48.96	35.00	.....	54.00	.....	1,802.27
Hampstead	890.00	800.00	192.25	68.85	35.00	120.00	75.00	14.97	2,196.07
Hampton	1,320.00	1,100.00	426.28	111.69	.....	.....	103.00	5.14	3,066.11
Hampton Falls.	620.00	875.00	.....	40.00	.....	.....	84.02	.....	1,619.02
Kensington	510.00	75.00	.....	30.09	.....	.....	60.07	.....	675.16
Kingston	655.00	200.00	.....	85.63	75.60	260.00	112.00	.....	1,397.23
Londonderry ..	1,460.00	1,200.00	.....	143.31	20.00	.....	213.70	.....	3,037.01
Newcastle	560.00	28.00	.....	22.55	.....	.....	16.20	10.00	637.15
Newfields	710.00	458.00	86.15	55.59	.....	.....	57.20	81.71	1,448.65
Newington	565.00	.....	.....	28.00	.....	.....	67.00	3.30	663.30
Newmarket	2,660.00	4,350.00	500.00	256.02	.....	300.00	37.92	204.00	8,307.94
Newton	655.00	500.00	170.14	81.09	.....	199.30	188.87	11.20	1,805.60
North Hampton	1,355.00	1,374.00	135.82	50.49	.....	.....	.....	.....	2,915.31
Northwood	1,245.00	.....	272.22	141.27	81.00	.....	121.42	.....	1,860.91
Nottingham	695.00	.....	.....	58.65	443.51	.....	54.30	113.71	1,365.17
Plaistow	635.00	800.00	.....	100.92	.....	277.17	120.06	.....	1,933.15
Portsmouth	27,925.00	6,418.32	.....	801.21	.....	.....	974.28	1,519.48	37,638.29
Raymond	1,015.00	700.00	.....	80.58	.....	230.58	178.65	.....	2,204.81
Rye	1,955.00	245.00	.....	78.54	.....	.....	106.80	78.87	2,464.21
Salem	1,315.00	1,802.00	.....	148.81	36.90	619.59	252.25	962.03	5,136.58
Sandown	325.00	150.00	76.07	36.72	.....	92.22	55.90	.....	735.91
Seabrook	560.00	1,140.00	137.77	151.90	.....	566.36	128.00	90.00	2,774.03
South Hampton	365.00	262.00	75.00	28.56	200.00	.....	55.44	.....	986.00
Stratham	1,060.00	.....	100.00	58.65	30.00	.....	65.90	.....	1,314.55
Windham	705.00	500.00	100.00	52.53	107.44	.....	95.00	8.75	1,568.72
Total	\$69,210.00	\$31,280.32	\$3,904.02	\$4,210.69	\$1,445.34	\$3,184.88	\$4,728.82	\$3,530.72	\$121,494.79

TABLE No. VI.—ROCKINGHAM COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Atkinson	\$50.00	\$54.30	\$100.30	\$838.00	.....	\$30.00	.....	\$82.58	\$1,050.88
Auburn	153.58	64.09	217.67	1,034.80	.....	85.00	\$5 00	61.19	1,403.66
Brentwood	77.67	15.12	92.79	827.50	.....	36.00	5 00	49.72	1,011.01
Candia	114.12	33.30	147.42	1,675.50	.....	90.11	5 00	189.64	2,107.67
Chester	115.29	33.75	149.04	1,446.50	.....	100.00	.....	237.12	1,932.66
Danville	42.45	32.65	75.10	944.70	.....	30.00	5 00	58.90	1,113.70
Deerfield	150.00	50.00	200.00	1,609.50	.....	85.00	.....	50.00	1,944.50
Derry	417.70	260.90	678.60	3,682.40	.....	301.00	15 00	1,221.81	5,898.81
East Kingston ..	33.28	4 60	37.88	597.00	.....	40.00	5 00	245.89	925.77
Epping	52.11	92.74	144.85	2,547.90	\$300.00	81.25	10 00	396.16	3,480.16
Exeter	709.81	399.63	1,109.44	8,924.00	.....	225.00	.....	2,119.10	12,377.54
Fremont	22.47	36.83	59.30	868.00	251.39	22.50	6 00	.....	1,207.19
Greenland	80.67	43.64	124.31	1,414.00	.....	45.00	.....	147.68	1,730.99
Hampstead	150.98	41.27	192.25	1,485.00	244.17	50.00	1 50	300 98	2,273.90
Hampton	314.13	109.73	423.91	1,658.00	.....	30.00	.....	492.20	2,604.11
Hampton Falls ..	50.00	.....	50.00	760.00	.....	60.00	.....	70.00	940.00
Kensington	15.00	.....	15.00	204.00	.....	25.00	.....	10.00	254.00
Kingston	70.00	15.00	85.00	1,371.00	.....	45.00	.....	100.00	1,601.00
Londonderry	220.46	96.58	317.04	2,136.25	.....	71.00	5 00	128.25	2,657.54
Newcastle	26.40	8.99	35.39	540.00	.....	20.00	10 00	79.40	684.79
Newfields	57.43	28.72	86.15	1,094.40	.....	33.00	.....	274.12	1,487.67
Newington	9.00	5.47	14.47	634.00	.....	14.00	.....	34.68	697.15
Newmarket	354 10	305.67	659.77	5,572.33	300.00	50.00	30 00	1,258.21	7,870.31
Newton	130.14	40.00	170.14	1,334.00	.....	60.00	.....	114.81	1,678.95
North Hampton ..	81.52	54.30	135.82	1,479.71	.....	55.00	.....	346.86	2,017.39
Northwood	255.42	16.80	272.22	1,676.25	.....	75.00	8 55	172.27	2,204.29
Nottingham	61.16	47.47	112.63	1,525.00	.....	75.00	5 68	173.65	1,892.16
Plaistow	98.34	51.41	149.75	1,604.95	.....	62.46	.....	282.16	2,099.32
Portsmouth	1,152.07	1,759.71	2,911.78	26,508.18	1,800.00	.....	.....	5,972.33	37,192.29
Raymond	125.00	75.00	200.00	1,663.93	.....	103.07	6 00	131.24	2,104.24
Rye	149.93	143.90	293.83	1,615.00	.....	70 00	.....	436.79	2,415.62
Salem	119.96	178.96	298.92	3,133.20	545.00	100.00	10 00	1,181.38	5,268.50
Sandown	70.75	5.32	76.07	610.00	.....	32.00	5 00	50.56	773.63
Seabrook	137.11	.....	137.11	2,075.00	.....	70.00	25 00	326.25	2,633.36
South Hampton ..	28.00	3.00	31.00	750.00	.....	22.50	.....	32.00	835.50
Stratham	55.00	90.90	145.90	1,070.00	.....	63.50	.....	86.37	1,365.77
Windham	23.18	21.30	44.48	1,188.50	.....	70.00	.....	119.73	1,422.71
Total	\$5,774.28	\$4,221.05	\$9,995.33	\$88,098.50	\$3,440.56	\$2,427.39	\$162.73	\$17,034.23	\$121,158.74

TABLE No. VI.—*Continued.*—ROCKINGHAM COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Atkinson.....			\$3.75	\$1,050.88	\$1,054.63	.0035	\$20.08	\$1.98
Auburn.....			145.72	1,403.66	1,549.38	.0040	16.72	2.44
Brentwood.....			31.02	1,011.01	1,042.03	.0036	11.81	1.10
Candia.....				2,107.67	2,107.67	.0019	12.81	.87
Chester.....				1,932.66	1,932.66	.0050	14.35	1.20
Danville.....				1,113.70	1,113.70	.0035	9.89	.72
Deerfield.....				1,944.50	1,944.50	.0048	10.97	1.09
Derry.....				5,898.81	5,898.81	.0040	15.36	1.77
East Kingston.....	\$113.28		16.18	925.77	1,055.23	.0025	20.63	.88
Epping.....				3,480.16	3,480.16	.0050	15.49	.65
Exeter.....			805.16	12,377.54	13,182.70	.0036	18.39	1.54
Fremont.....				1,207.19	1,207.19	.0044	12.58	.61
Greenland.....			54.08	1,720.99	1,785.07	.0030	19.03	1.44
Hampstead.....			131.54	2,273.90	2,405.44	.0063	19.24	1.54
Hampton.....			114.03	2,604.11	2,718.14	.0036	14.54	2.24
Hampton Falls.....				940.00	940.00	.0032	13.33	1.04
Kensington.....			15.00	254.00	269.00	.0035	5.75	.27
Kingston.....				1,601.00	1,601.00	.0033	10.62	.57
Londonderry.....			187.56	2,657.54	2,845.10	.0049	12.02	1.40
Newcastle.....			15.86	684.79	700.65	.0045	18.55	1.01
Newfields.....			135.19	1,487.67	1,622.86	.0066	13.68	.88
Newington.....				697.15	697.15	.0033	17.50	.36
Newmarket.....	91.00		2,668.03	7,870.31	10,629.34	.0057	18.13	1.28
Newton.....				1,678.95	1,678.95	.0054	14.61	1.28
North Hampton.....				2,017.39	2,017.39	.0028	22.44	1.62
Northwood.....			100.00	2,204.29	2,304.29	.0049	12.18	1.96
Nottingham.....			40.00	1,892.16	1,932.16	.0051	23.41	1.48
Plaistow.....			24.98	2,099.32	2,124.30	.0055	13.69	.96
Portsmouth.....			5,928.32	37,192.29	43,120.61	.0055	28.00	1.89
Raymond.....			200.00	2,104.24	2,304.24	.0054	11.03	1.01
Rye.....			242.63	2,415.62	2,658.25	.0044	17.22	2.27
Salem.....			166.36	5,268.50	5,434.86	.0076	22.55	1.24
Sandown.....				773.63	773.63	.0050	12.68	1.33
Seabrook.....			115.00	2,633.36	2,748.36	.0095	12.06	.62
South Hampton.....				835.50	835.50	.0039	13.70	.72
Stratham.....			186.08	1,365.77	1,551.85	.0044	13.65	1.36
Windham.....			25.71	1,422.71	1,448.42	.0046	20.00	.61
Total.....		\$204.28	\$11,352.20	\$121,158.74	\$132,715.22	.0045	\$18.67	\$1.41

TABLE No. 1.—STRAFFORD COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Barrington.....	1	11	.....	6	.....	22	10	20.90
Dover.....	1	34	30	.....	.....	37	37	37.00
Durham.....	1	4	4	.....	.....	37	35	36.00
Farmington.....	2	13	7	3	.....	37	32	34.46
Lee.....	1	3	.....	.....	.....	34	34	34.00
Madbury.....	1	3	.....	1	2	31	30	30.33
Middleton.....	1	4	.....	1	.....	25	23	23.75
Milton.....	1	13	6	4	.....	30	30	30.00
New Durham.....	1	7	.....	6	.....	24	21	23.55
Rochester.....	1	26	23	.....	.....	38	38	38.00
Rollinsford.....	2	8	4	1	.....	36	36	36.00
Somersworth.....	1	22	19	.....	.....	36	36	36.00
Strafford.....	1	11	.....	3	1	26	26	26.00
Total.....	15	159	93	25	3	.....	.....	31.23

TABLE No. II.—STRAFFORD COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture and sites.	Estimated value of apparatus.
Barrington	12	.....	1	12	\$6,400.00	\$10.00
Dover	20	.....	.....	42	145,000.00	2,000.00
Durham	5	1	.....	6	3,000.00	500.00
Farmington	16	3	.....	20	30,500.00	950.00
Lee	3	.....	.....	3	2,500.00	100.00
Madbury	3	.....	.....	3	2,290.00	10.00
Middleton	4	.....	.....	4	1,500.00	.....
Milton	9	.....	.....	14	.....	.....
New Durham	8	.....	.....	8	3,500.00	100.00
Rochester	15	1	1	40	140,000.00	1,000.00
Rollinsford	5	.....	.....	9	8,000.00	600.00
Somersworth	7	.....	.....	24	150,000.00	35,000.00
Strafford	14	.....	.....	14	4,560.00	150.00
Total	121	5	2	199	\$497,160.00	\$40,420.00

TABLE No. III.—STRAFFORD COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Barrington	92	107	108	128	29	198	9	....	4	13	175	151	86	....	....
Dover	1,063	1,175	802	818	138	1,378	104	12	....	....	1,442	1,348	92	700	....
Durham	65	57	82	52	13	119	2	....	8	3	110	87	78	....	....
Farmington	168	176	203	203	44	334	28	....	1	....	344	308	91	....	1
Lee	28	31	33	31	4	59	1	....	4	2	45	34	73	....	....
Madbury	32	30	24	24	4	41	3	....	5	....	42	39	93	....	18
Middleton	30	23	30	23	6	46	1	....	....	1	53	48	90	....	....
Milton	130	142	144	137	24	255	2	....	....	....	252	214	84	....	....
New Durham ..	53	44	57	51	7	100	1	....	....	....	95	78	95	....	....
Rochester	645	672	664	673	128	1,116	93	6	....	....	1,056	948	89	350	10
Rollinsford	155	188	165	174	23	309	7	....	1	....	286	250	87	....	....
Somersworth	814	825	576	547	162	865	96	....	....	....	871	798	91	400	25
Strafford	83	78	94	86	18	152	10	....	3	18	157	137	89	....	....
Total	3,358	3,548	2,982	2,947	600	4,972	357	18	26	37	4,928	4,440	90	1450	5

TABLE No. IV.—STRAFFORD COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.							
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.	Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.
Barrington.....			11	\$24.00	1	1	3	1
Dover.....	2	\$85.00	35	43.43	.....	.....	9	10
Durham.....			4	34.80	1	.....	.....	1
Farmington.....			13	34.24	1	1	.....	.....
Lee.....			3	32.00	.....	.....	.....	1
Madbury.....			3	26.00	.....	.....	.....	.....
Middleton.....			4	24.00	1	.....	.....	1
Milton.....	2	52.00	11	30.52	2	.....	.....	1
New Durham.....	1	24.00	6	23.50	2	4	.....	.....
Rochester.....	1	43.68	25	37.54	3	.....	13	3
Rollinsford.....			8	35.18	.....	2	1	1
Somersworth.....	1	100.00	21	40.00	.....	.....	2	2
Strafford.....			11	23.82	1	2	1	.....
Total.....	7	\$60.93	155	\$31.46	12	10	30	20

TABLE No. V.—STRAFFORD COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Barrington ...	\$1,145.00	\$400.00		\$120.87					\$1,665.87
Dover	21,095.00	5,411.00	\$1,600.00	864.45			\$883.35	\$707.66	30,561.46
Durham	1,440.00	900.00	100.00	68.85		\$150.00			2,658.85
Farmington..	2,720.00	2,150.00	738.81	213.69			421.75	2,185.28	8,429.53
Lee	745.00		44.26	31.11			87.60	2.00	909.97
Madbury	660.00			21.93	\$11.40		101.50		794.83
Middleton ...	195.00	150.00		25.00	20.00	94.22	52.20		536.42
Milton.....	1,590.00		500.00	150.96	1,500.00		204.60	1,731.73	5,677.29
New Durham	420.00	104.91		51.00	180.00	176.64	92.76	35.00	1,060.31
Rochester....	9,760.00	8,288.00		634.50			914.64	161.92	19,759.06
Rollinsford ..	2,690.00	1,200.00		163.71			163.75	90.00	4,307.46
Somersworth	7,170.00	9,830.00		572.73			430.86		18,003.59
Strafford.....	1,116.00	300.00		91.80	55.50		111.18		1,668.48
Total	\$50,740.00	\$28,733.91	\$2,983.07	\$3,010.60	\$1,766.90	\$420.86	\$3,464.19	\$4,913.59	\$96,033.12

TABLE No. VI.—STRAFFORD COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Barrington ...	\$302.34	\$241.34	\$543.68	\$1,370.00	.....	\$296.00	\$7.00	\$436.64	\$2,653.32
Dover.....	839.62	794.79	1,634.41	24,153.07	\$1,500.00	110.00	500.00	406.09	28,303.57
Durham.....	38.61	50.69	89.30	1,670.00	241.66	50.00	.....	83.80	2,134.76
Farmington..	299.15	502.78	801.93	5,543.45	.....	360.00	53.50	1,234.08	7,992.96
Lee.....	.....	44.26	44.26	816.00	.....	60.00	.....	44.48	964.74
Madbury.....	43.62	21.01	64.63	590.00	.....	45.00	.....	37.25	736.88
Middleton...	45.31	6.31	51.62	570.00	.....	30.00	.....	.....	651.62
Milton.....	241.93	264.19	446.12	2,997.00	.....	210.00	12.00	31.50	3,696.62
New Durham.	29.75	29.75	59.50	971.00	.....	51.92	5.00	49.38	1,136.80
Rochester....	925.31	398.37	1,323.68	12,712.57	1,058.33	25.00	50.00	5,434.07	20,603.65
Rollinsford...	172.34	193.85	366.19	3,432.00	.....	60.00	30.00	166.45	4,054.64
Somersworth.	682.37	450.62	1,132.99	12,818.80	.....	100.00	150.00	3,564.83	17,766.62
Strafford....	267.45	20.45	287.90	1,637.50	.....	75.00	13.50	161.23	2,175.13
Total	\$3,887.80	\$2,958.41	\$6,846.21	\$69,281.39	\$2,799.99	\$1,472.92	\$821.00	\$11,649.80	\$92,871.31

TABLE No. VI.—*Continued.*—STRAFFORD COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Barrington.....	\$1,000.00		\$58.78	\$2,653.32	\$3,712.10	.0030	\$13.00	\$3.10
Dover.....	550.00		1,499.76	28,303.57	30,353.33	.0034	20.38	1.13
Durham.....			131.23	2,134.76	2,265.99	.0038	19.69	.80
Farmington.....			802.15	7,992.96	8,795.11	.0029	25.57	2.33
Lee.....				964.74	964.74	.0034	21.43	.98
Madbury.....				736.88	736.88	.0036	17.21	1.76
Middleton.....				651.62	651.62	.0035	13.57	.97
Milton.....				3,696.62	3,696.62	.0025	14.54	1.73
New Durham.....			9.63	1,136.80	1,146.43	.0038	13.54	.73
Rochester.....	28,820.50	\$5,600.00		20,603.65	55,024.15	.0064	19.77	1.25
Rollinsford.....		202.67	102.09	4,054.64	4,359.40	.0042	13.95	1.28
Somersworth.....			1,408.80	17,766.62	19,175.42	.0030	19.10	1.30
Strafford.....			203.80	2,175.13	2,378.93	.0052	14.12	1.83
Total.....	\$30,370.50	\$5,802.67	\$4,216.24	\$92,871.31	\$133,260.72	.0037	\$19.70	\$1.39

TABLE No. I.—SULLIVAN COUNTY.

(For the year ending August 1, 1902.)

SCHOOLS BELOW HIGH SCHOOLS.

TOWNS.	School districts.	Public schools.	Graded schools.	Schools of twelve or less, more than six.	Schools of six scholars or less.	Greatest number of weeks in any school.	Least number.	Average number of weeks.
Acworth.....	1	6	.....	4	.....	27	9	22.50
Charlestown.....	1	9	4	1	.....	35	30	33.33
Claremont.....	1	24	19	1	.....	36	11	34.95
Cornish.....	1	11	.....	7	1	30	10	20.67
Croydon.....	1	4	.....	2	.....	23	22	22.85
Goshen.....	1	4	.....	1	2	26	17	21.75
Grantham.....	1	3	.....	1	.....	23	21	22.30
Langdon.....	1	4	.....	.....	3	30	11	23.25
Lempster.....	1	4	.....	.....	.....	32	22	25.00
Newport.....	1	13	7	1	.....	36	33	34.53
Plainfield.....	1	9	.....	4	2	30	10	25.66
Springfield.....	1	6	.....	1	1	23	21	21.43
Sunapee.....	1	7	3	1	.....	29	27	28.00
Unity.....	1	7	.....	5	.....	26	22	24.71
Washington.....	1	8	.....	2	2	23	9	20.41
Total.....	15	119	33	31	11	.....	.....	25.42

TABLE No. II.—SULLIVAN COUNTY.

(For the year ending August 1, 1902.)

SCHOOLHOUSES.

TOWNS.	Number of school-houses.	Reported unfit for use.	Built during the year.	Number of school-rooms.	Estimated value of school buildings, furniture, and sites.	Estimated value of apparatus
Acworth.....	10	.....	.....	12	\$5,200 00	\$500.00
Charlestown.....	7	.....	.....	11	18,500.00	100.00
Claremont.....	17	4	.....	27	45,000 00	500.00
Cornish.....	13	.....	.....	13	5,000 00	120 00
Croydon.....	4	.....	.....	4	2,000.00	60 00
Goshen.....	5	.....	.....	5	600.00	100.00
Grantham.....	4	1	.....	4	1,075.00	150.00
Langdon.....	5	.....	.....	5	1,500.00	80.00
Lempster.....	8	.....	.....	8	2,500.00	150.00
Newport.....	13	.....	.....	23	29,000 00	800 00
Plainfield.....	14	.....	.....	15	3,000 00	50 00
Springfield.....	9	1	.....	9	1,300 00	100.00
Sunapee.....	10	.....	1	13	10,000 00	167.00
Unity.....	7	.....	.....	7	4,300.00	200.00
Washington.....	9	.....	.....	10	3,500.00	20 00
Total.....	135	6	1	166	\$132,475.00	\$3,077.00

TABLE No. III.—SULLIVAN COUNTY.

(For the year ending August 1, 1902.)

SCHOLARS.

TOWNS.	Truant officers' enumeration.		Attended for two weeks.		Under six years.	Between six and sixteen.	Over sixteen years.	Non-resident pupils in high school.	Pupils attending high school, tuition paid by town.	Pupils attending academy, tuition paid by town.	Average membership.	Average daily attendance.	Per cent. of attendance daily.	In parochial schools.	In other private schools.
	Boys.	Girls.	Boys.	Girls.											
Acworth.....	39	45	56	53	11	89	9	.....	2	2	88	76	86	.....	.....
Charlestown....	122	129	120	132	20	224	8	.....	.....	.....	184	160	78	.....	.....
Claremont.....	541	542	537	523	61	936	63	3	.....	.....	920	858	93	125	20
Cornish.....	108	80	102	73	18	148	9	.....	10	10	137	128	89	.....	3
Croydon.....	61	32	58	30	5	78	5	.....	1	1	75	61	88	.....	.....
Goshen.....	24	21	30	24	4	44	6	.....	.....	.....	37	32	81	.....	.....
Grantham.....	46	46	48	46	6	85	3	.....	.....	.....	73	64	87	.....	.....
Langdon.....	27	15	31	22	8	45	.....	3	3	.....	53	35	66	.....	.....
Lempster.....	45	30	57	36	6	84	3	.....	.....	2	67	61	90	.....	.....
Newport.....	249	240	277	269	37	456	53	5	.....	.....	519	463	89	.....	.....
Plainfield.....	79	78	78	78	13	139	4	.....	.....	37	120	105	85	.....	.....
Springfield.....	51	45	50	43	8	81	4	.....	.....	1	75	67	89	.....	.....
Sunapee.....	101	97	128	108	26	199	11	.....	2	6	154	132	85	.....	.....
Unity.....	60	44	76	62	11	121	6	.....	1	2	106	90	85	.....	.....
Washington....	32	32	56	53	8	100	1	.....	1	.....	98	81	80	.....	.....
Total.....	1,584	1,476	1,704	1,552	242	2,829	185	8	10	61	2,707	2,413	88	125	23

TABLE No. IV.—SULLIVAN COUNTY.

(For the year ending August 1, 1902.)

TEACHERS.

TOWNS.	Teachers below high school.				Number teaching first time.	Number not graduates of high school or academy.	Graduates of a normal school.	Graduates of a training school.	Graduates of a college.
	Number of schools having men teachers.	Average wages per month.	Number of schools having women teachers.	Average wages per month.					
Acworth			6	\$23.33		4			
Charlestown	1	\$72.00	8	32.88	1				1
Claremont			24	36.88	3	3	1	1	
Cornish	2	24.00	11	21.67	2	3	2	4	
Croydon			4	24.12		7		1	
Goshen			4	22.25	4	4			
Grantiam			3	25.44			1		
Langdon			4	23.00	1	3		1	
Lempster	1	29.33	3	24.00			1		
Newport	2	33.00	11	31.64	1	2	5	1	1
Plainfield			9	23.33	5	7			
Springfield	1	20.00	6	19.90	4	7	1	1	
Sunapee	1	43.00	7	23.18	2	6	1		1
Unity			7	27.00	2	5			
Washington	1	28.00	7	22.00	4	7		1	
Total	9	\$35.62	114	\$25.39	29	58	12	10	3

TABLE No. V.—SULLIVAN COUNTY.

(For the year ending August 1, 1902.)

REVENUE.

TOWNS.	Amount required by law.	Additional amount voted.	Raised for books and supplies.	Literary fund.	Local funds.	State appropriation for schools under law of 1899.	Dog licenses.	Amount from all other sources.	Total.
Acworth	\$580 00	\$300 00	.....	\$49.98	.....	.....	\$63.36	\$4.00	\$997.34
Charlestown.	1,700 00	1,685.00	\$300.00	133.11	\$11.66	.....	112.50	8.25	3,950.52
Claremont...	6,740.00	6,912 00	.....	417.69	720.50	.....	314.40	2,119.87	17,224.46
Cornish	930 00	300 00	229.18	93.84	9.03	\$213.31	127.90	16.40	1,919.66
Croydon	385.00	100 00	.....	45.39	64.00	.....	10.00	.....	604.39
Goshen	300.00	100.00	.....	26.01	.....	.....	72.93	.....	498.94
Grantham...	270.00	202 00	68.92	41.82	7.20	139.91	49.92	36.09	815.86
Langdon	435 00	.....	.....	27.54	.....	.....	28.56	12.00	503.10
Lempster	325.00	150.00	109.44	45.39	55.98	114.40	49.29	.....	849.50
Newport	4,190.00	3,200 00	.....	300.39	94.00	.....	267.31	57 00	8,108.70
Plainfield ..	990 00	100 00	130.00	86.19	80.24	.....	61.23	108.45	1,556.11
Springfield ..	285 00	200 00	.....	48.96	.....	154.37	.....	10.48	698.81
Sunapee	955 00	500 00	.....	94.86	.....	.....	127.20	2.95	1,680.01
Unity	430 00	200 00	100.00	57.63	185.08	143.31	102.28	.....	1,218.30
Washington.	525 00	.....	.....	45.39	55.00	.....	70.07	.....	695.46
Total	\$19,040 00	\$13,949.00	\$937.54	\$1,514.19	\$1,282.69	\$765.30	\$1,456.95	\$2,375.49	\$41,321.16

TABLE No. VI.—SULLIVAN COUNTY.

(For the year ending August 1, 1902.)

CURRENT EXPENSES.

TOWNS.	Text-books and supplies.			Teachers' salaries.	Superintendent.	School board.	Truant officers.	Miscellaneous.	Total.
	Books.	Supplies.	Total.						
Acworth.....	\$104.05	\$22.15	\$126.20	\$785.50.....		\$60.00	\$3.00	\$183.96	\$1,158.66
Charlestown....	272.27	7.90	280.17	2,787.75.....		150.00		1,173.58	4,391.50
Claremont.....	497.81	759.37	1,257.18	12,108.43	\$1,073.08	142.67	25.50	3,167.48	17,774.34
Cornish.....	200.00	29.18	229.18	1,521.50.....		76.25	5.00	179.50	2,011.43
Croydon.....	35.32	3.92	39.24	494.95.....		36.00		76.63	646.82
Goshen.....	36.88	9.68	46.56	484.00.....		32.00	2.00	35.95	600.51
Grantham.....	61.87	7.05	68.92	414.90.....		27.00		87.10	597.92
Langdon.....	15.56	11.25	26.81	530.00.....		28.00		91.99	676.80
Lempster.....	95.42	14.02	109.44	640.00.....		60.00	5.00	166.68	981.12
Newport.....	548.52	274.26	822.78	5,848.42.....		250.00	40.00	1,410.44	8,371.64
Plainfield.....	131.53	25.00	156.53	1,318.33.....		100.00	6.00	24.79	1,605.65
Springfield.....	32.16	14.80	46.96	640.23.....		36.50	5.00	80.25	808.94
Sunapee.....	158.97	20.60	179.57	1,545.00.....		50.50		62.31	1,836.88
Unity.....	95.40	26.87	122.27	951.30.....		36.00	3.00	80.00	1,192.57
Washington....	3.00	56.87	59.87	648.77.....		52.00	5.00	14.35	779.99
Total	\$2,288.76	\$1,282.92	\$3,571.68	\$30,719.08	\$1,073.08	\$1,136.42	\$99.50	\$6,835.01	\$43,434.77

TABLE No. VI.—*Continued.*—SULLIVAN COUNTY.

(For the year ending August 1, 1902.)

EXPENDITURES.

TOWNS.	New buildings.	Interest and debt.	Permanent repairs.	Current expenses.	Total expenditures.	Rate of school assessment.	Average of total expenditure per pupil.	Average per pupil for books and supplies.
Acworth.....				\$1,158.66	\$1,158.66	.0031	\$11.61	\$1.43
Charlestown ...				4,391.50	4,391.50	.0033	22.34	1.61
Claremont			\$500.00	17,774.34	18,274.34	.0049	17.95	1.36
Cornish			135.39	2,011.43	2,146.82	.0040	15.40	1.78
Croydon.....				646.82	646.82	.0015	8.62	.47
Goshen.....				600.51	600.51	.0042	15.26	1.23
Grantham.....			125.00	597.92	722.92	.0038	9.90	.94
Langdon.....			52.08	676.80	728.88	.0032	13.75	.50
Lempster			95.01	981.12	1,076.13	.0066	15.97	1.62
Newport.....				8,371.64	8,371.64	.0049	14.51	1.59
Plainfield			43.51	1,605.65	1,649.16	.0039	13.53	1.51
Springfield			40.86	808.94	849.80	.0035	10.26	.63
Sunapee	\$4,294.89		98.81	1,836.88	6,230.58	.0035	12.16	1.16
Unity			100.00	1,192.57	1,292.57	.0033	11.25	1.15
Washington....			14.35	779.99	794.34	.0032	8.10	.61
Total.....	\$4,294.89		\$1,205.01	\$43,434.77	\$48,934.67	.0039	\$16.49	\$1.31

STATISTICAL SUMMARY

No.	Belknap.	Carroll.	Cheshire.	Coös.
TOWNS.				
1 Towns having organized schools...	11	17	22	21
DISTRICTS.				
2 Districts under special acts.....	2	2	1	4
SCHOOLS.				
3 Public Schools.....	130	144	182	183
4 Graded.....	53	22	101	62
5 High schools.....	2	.....	5	4
6 Number averaging twelve and more than six.....	32	29	31	47
7 Number averaging six or less.....	5	8	.....	8
8 Average length of schools in weeks of five days.....	26.20	26.18	27.12	27.52
SCHOOLHOUSES.				
9 Number.....	120	135	164	150
10 Unfit for use.....	7	2	6	3
11 Built during year.....	2	.....	2	.....
12 Number of schoolrooms.....	161	157	250	204
13 Estimated value of buildings, furniture, and sites.....	\$187,425.00	\$95,000.00	\$288,385.00	\$164,090.00
14 Estimated value of apparatus.....	4,785.00	3,635.00	7,561.00	510.00
SCHOLARS.				
15 (Truant officers' enumeration) (Boys.....)	1,650	1,582	2,912	3,268
16 (Truant officers' enumeration) (Girls.....)	1,613	1,500	2,987	3,272
17 Boys attending two weeks or more.....	1,773	1,565	2,974	2,810
18 Girls attending two weeks or more.....	1,744	1,634	3,096	2,839
19 Number under six years.....	273	289	549	520
20 Number between six and sixteen.....	3,079	2,741	5,154	4,786
21 Number over sixteen.....	165	169	367	343
22 Average membership of all.....	2,978	2,724	5,035	4,552
23 Average attendance of all.....	2,734	2,324	4,610	3,934
24 Average attendance to each school.....	20	16	24	20
25 Per cent. of attendance.....	92	86	91	86
26 Number in parochial schools.....	1	.....	251	1,141
27 Number in other private schools.....	15	38	40	18
28 Whole number reported under 17, 18, 26, 27.....	3,533	3,237	6,361	6,808
29 Number attending public high schools.....	130	.....	302	184
30 Average number of weeks in high schools.....	37	.....	36	34.75
31 Non-resident pupils in high schools.....	18	.....	48	13
32 Pupils attending high schools, tuition paid by town.....	36	19	47	10
33 Pupils attending academies, tuition paid by town.....	100	2	8	2
TEACHERS (below high schools).				
34 Number schools having men teachers.....	8	28	13	17
35 Average wages per month.....	\$45.03	\$31.67	\$43.04	\$43.97
36 Number schools having women teachers.....	129	120	189	173
37 Average wages per month.....	\$28.07	\$26.54	\$30.23	\$26.11
38 Number teaching first time.....	19	20	26	33

BY COUNTIES.—1902.

No.	Grafton.	Hillsborough.	Merrimack.	Rockingham.	Strafford.	Sullivan.
1	37	31	27	37	13	15
2	13	2	4	1	2	.....
3	312	404	285	265	159	119
4	86	246	106	111	93	33
5	8	8	5	2	4	2
6	88	69	74	38	25	31
7	21	22	21	6	3	11
8	27.71	29.72	28.87	30.13	31.23	25.42
9	281	259	253	229	121	135
10	6	7	12	.....	5	6
11	.....	.....	2	.....	2	1
12	370	505	355	302	199	166
13	\$269,530.00	\$1,382,238.20	\$609,950.00	\$334,725.00	\$497,160.00	\$132,475.00
14	12,580.00	78,335.00	34,020.00	9,705.50	40,420.00	3,077.00
15	3,719	9,784	3,707	4,257	3,358	1,584
16	3,644	9,765	4,417	4,308	3,548	1,476
17	4,096	7,460	4,399	4,342	2,982	1,704
18	3,935	7,283	4,109	4,006	2,947	1,552
19	590	1,219	810	758	600	242
20	6,961	12,862	7,201	7,312	4,972	2,829
21	480	662	497	278	357	185
22	6,374	11,980	7,122	7,089	4,928	2,707
23	5,639	10,760	6,395	6,031	4,440	2,413
24	17	26	22	22	26	19
25	88	89	89	85	90	88
26	2	6,355	1,182	503	1,450	125
27	38	38	143	226	54	23
28	8,071	21,136	9,833	9,077	7,433	3,404
29	409	990	549	256	410	168
30	36.12	36.37	36.80	37	38	36.50
31	86	105	84	48	18	8
32	65	75	75	71	26	10
33	78	70	86	246	37	61
34	21	25	9	19	7	9
35	\$33.35	\$43.78	\$50.13	\$48.37	\$60.93	\$35.62
36	287	396	285	251	155	114
37	\$25.27	\$30.69	\$28.36	\$39.02	\$31.46	\$25.39
38	53	43	53	36	12	29

STATISTICAL SUMMARY

No.		Belknap.	Carroll.	Cheshire.	Coös.
	TEACHERS (below high schools). — <i>Continued.</i>				
39	Number not graduates of high schools or academies	29	57	37	74
40	Number training school graduates	8	9	20	21
41	Normal school graduates	35	22	33	36
42	College graduates	1	10	5	10
	HIGH SCHOOL TEACHERS.				
43	Men teachers	3	.....	7	4
44	Average salary (annual) of principal	\$875.00	.....	\$1,025.00	\$1,000.00
45	Women teachers	3	.....	9	6
46	Average annual salary	\$566.70	.....	\$418.60	\$456.75
	REVENUE.				
47	Amount required by law	\$23,305.00	\$13,280.00	\$39,570.00	\$20,775.00
48	Additional amount voted	17,431.75	10,424.00	34,365.70	28,878.22
49	Raised for books and supplies ..	1,238.02	1,330.34	5,936.21	3,260.43
50	Literary fund	1,859.80	1,600.37	3,041.73	2,723.13
51	Local funds	1,010.06	1,152.69	958.91	252.92
52	State appropriation under law of 1899	682.07	3,609.72	1,580.19	6,397.12
53	Dog licenses	1,465.87	1,335.62	3,445.12	1,631.37
54	From all other sources	737.42	2,856.32	6,695.11	5,757.53
55	Total amount	47,729.99	35,639.06	95,592.97	69,675.72
	EXPENDITURES.				
56	Text-books	\$2,472.07	\$1,830.65	\$6,082.31	\$3,701.03
57	Supplies	968.06	668.07	2,200.53	1,436.24
58	Teachers' salaries	34,893.74	27,645.73	57,878.45	48,824.93
59	Superintendents	1,750.01	.....	2,333.32	.....
60	School boards	1,063.64	1,427.50	2,143.23	1,466.76
61	Truant officers	76.45	136.88	94.75	82.00
62	Miscellaneous	5,995.24	4,538.45	16,044.78	8,944.57
63	New buildings	16,000.00	.....	12,168.50	225.00
64	Interest and debt	1,900.00	753.32	5,083.15	3,160.17
65	Permanent repairs	2,045.66	1,755.25	3,716.60	6,781.60
66	Total amount	67,164.87	38,755.85	107,750.62	74,622.30
67	Rate of school assessment .....	.0051	.0050	.0049	.0049
68	Average of total expenditure per pupil	\$17.21	\$14.50	\$18.98	\$16.34
69	Average for books and supplies per pupil	1.15	.91	1.64	1.13

BY COUNTIES.—1902.—*Continued.*

No.	Grafton.	Hillsborough.	Merrimack.	Rockingham.	Strafford.	Sullivan.
39	131	20	84	62	10	58
40	37	139	54	47	20	10
41	47	66	49	41	30	12
42	18	28	15	15	11	3
43	11	12	5	4	6	3
44	\$1,042.00	\$1,218.75	\$1,108.00	\$1,300.00	\$1,250.00	\$1,200.00
45	14	28	16	7	12	9
46	\$409.85	\$458.95	\$476.53	\$593.75	\$520.83	\$445.00
47	\$40,260.00	\$144,895.00	\$75,415.00	\$69,210.00	\$50,740.00	\$19,040.00
48	47,767.20	102,721.32	42,831.57	31,280.32	28,733.91	13,949.60
49	5,170.40	3,086.02	4,843.37	3,904.02	2,983.07	937.54
50	4,010.16	7,313.11	4,269.85	4,210.69	3,010.60	1,514.19
51	1,197.26	4,410.91	336.50	1,445.34	1,766.90	1,282.69
52	2,915.94	312.69	1,288.19	3,184.88	420.86	765.30
53	3,723.00	5,164.92	3,623.92	4,728.82	3,464.19	1,456.95
54	3,895.51	6,485.22	5,989.07	3,530.72	4,913.59	2,375.49
55	108,939.47	274,389.19	138,597.47	121,494.79	96,033.12	41,321.16
56	5,457.22	10,988.77	7,201.42	5,774.28	3,887.80	2,288.76
57	2,641.16	6,936.28	4,047.72	4,221.05	2,958.41	1,282.92
58	75,384.48	194,773.46	93,209.26	88,098.50	69,281.39	30,719.08
59	125.00	4,100.00	3,958.33	3,440.56	2,799.99	1,073.08
60	2,928.63	3,538.44	2,766.08	2,427.39	1,472.92	1,136.42
61	282.45	1,731.62	750.90	162.73	821.00	99.50
62	15,852.91	55,182.83	12,186.13	17,034.23	11,649.80	6,835.01
63	527.78	3,465.77	29,792.43	.....	30,370.50	4,294.89
64	8,914.12	807.87	982.84	204.28	5,802.67	.....
65	4,962.45	4,101.29	6,662.38	11,352.20	4,216.24	1,205.01
66	117,076.20	285,626.33	161,557.49	132,715.22	133,260.72	48,934.67
67	.0049	.0047	.0046	.0045	.0037	.0039
68	\$16.86	\$23.55	\$18.50	\$18.67	\$19.70	\$16.49
69	1.26	1.49	1.50	1.41	1.39	1.31

STATE SUMMARY.

No.		1901.	1902.	Increase.	De- crease.
	TOWNS.				
1	Towns having organized schools...	232	231	.....	.....
	DISTRICTS.				
2	Districts under special acts	31	31	.....	.....
	SCHOOLS.				
3	Public schools	2,173	2,183	10	.....
4	Graded	764	913	149	.....
5	High schools	57	*40	.....	17
6	Number averaging twelve and more than six	481	464	.....	17
7	Number averaging six or less	105	105	.....	.....
8	Average length of schools in weeks of five days	28.12	28.01	.....	.....
	SCHOOLHOUSES.				
9	Number	1,841	1,847	6	.....
10	Reported unfit for use	61	54	.....	7
11	Built during the year	7	9	2	.....
12	Number of schoolrooms	2,642	2,669	27	.....
13	Estimated value of buildings, fur- niture, and sites	\$3,751,275.00	\$3,960,987.20	\$209,712.20	.....
14	Estimated value of apparatus	176,567.50	194,628.50	18,061.00	.....
	SCHOLARS.				
15	Truant officers' enumera- } Boys.	35,203	35,821	618	.....
16	tion	36,156	35,530	.....	626
17	Boys attended two weeks or more.	33,542	34,105	563	.....
18	Girls attended two weeks or more.	32,743	33,145	402	.....
19	Number under six years	5,780	5,850	70	.....
20	Number between six and sixteen ..	56,818	57,897	1,079	.....
21	Number over sixteen	3,687	3,503	.....	184
22	Average membership of all	53,851	55,489	1,638	.....
23	Average attendance of all	48,590	49,280	690	.....
24	Average attendance to each school	21	22	1	.....
25	Per cent. of attendance	88	92	4	.....
26	†Number in parochial schools	10,092	10,910	818	.....
27	Number in other private schools ..	662	633	.....	29
28	Whole number reported under 17, 18, 26, 27	77,039	78,793	1,754	.....
29	Number attending public high schools	4,153	*3,142	.....	1,011
30	Average number of weeks in high schools	36.02	36.73	.71	.....
31	Non-resident pupils in high schools	.....	428	.....	.....
32	Pupils attending high schools, tui- tion paid by town .....	.....	434	.....	.....
33	Pupils attending academies, tui- tion paid by town .....	.....	690	.....	.....
	TEACHERS (below high schools).				
34	Number schools having men teachers	155	156	1	.....
35	Average wages per month	\$38.30	\$43.58	\$5.28	.....
36	Number schools having women teachers	2,394	2,072	.....	322

* Approved under law of 1901. † Estimated by school boards.

STATE SUMMARY.—*Continued.*

No.		1901.	1902.	Increase.	De- crease.
	TEACHERS (below high schools)— <i>Continued.</i>				
37	Average wages per month	\$27.97	\$29.11	\$1.14	.....
38	Number teaching first time	343	324	.....	.....
39	* Number not graduates of high schools or academies.....	594	562	.....	.....
40	Number training school graduates	406	365	.....	.....
41	Number normal school graduates	385	371	.....	.....
42	Number college graduates	207	116	.....	.....
	HIGH SCHOOL TEACHERS.				
43	Men teachers.....	75	*51	.....	24
44	Average salary of principal.....	\$922.50	\$1,088.70	\$166.20	.....
45	Women teachers.....	114	97	.....	17
46	Average salary.....	\$475.11	\$469.15	.....	\$5.96
	REVENUE.				
47	Amount required by law	\$496,250.00	\$496,250.00	.....	.....
48	Additional amount voted	404,581.30	358,382.99	.....	\$46,198.31
49	Raised for books and supplies.....	34,503.06	32,739.42	.....	1,763.64
50	Literary fund.....	32,844.00	33,553.63	\$709.63	.....
51	Local funds.....	14,354.67	13,814.18	.....	540.49
52	State appropriation under law of 1899:				
	<i>a.</i> District superintendents	1,500.00	2,425.00	925.00	.....
	<i>b.</i> School money	18,750.00	18,750.00	.....	.....
53	Dog licenses	29,437.36	30,039.78	602.42	.....
54	From all other sources.....	29,337.51	43,235.98	13,898.47	.....
55	Total amount.....	1,061,557.90	1,029,190.98	.....	32,366.92
	EXPENDITURES.				
56	Text-books	46,657.88	49,684.31	3,026.43	.....
57	Supplies	24,749.82	27,360.44	2,610.62	.....
58	Teachers' salaries.	697,295.78	720,709.02	23,413.24	.....
59	Superintendents	15,720.64	19,580.29	3,859.65	.....
60	School boards	20,443.73	20,371.01	.....	72.72
61	Truant officers	4,498.54	4,238.28	.....	260.26
62	Miscellaneous	164,147.33	154,263.95	.....	9,883.38
63	New buildings	83,267.55	96,344.87	13,577.32	.....
64	Interest and debt	53,335.11	27,613.42	.....	25,721.69
65	Permanent repairs.....	39,744.58	46,798.68	7,054.10	.....
66	Total amount	1,149,860.96	1,167,464.27	17,603.31	.....
67	Rate of school assessment.....	.0046	.0046	.....	.....
68	Average of total expended per pu- pil.....	19.62	19.67	.05	.....
69	Average for books and supplies per pupil.....	1.33	1.38	.05	.....

* Questions 38-42 for 1901, included high schools.

ERRATA.

Page 154. Total of column 7 should be \$1,541.65 instead of \$1,531.65.

Page 172. Total of column 1 should be 250 instead of 150.

Page 199. Under Merrimack county, Nos. 19, 20, 21 should be 829, 7,087, 474.

Pages 200 and 201. Under Coös county, No. 57 should be \$1,541.65, No. 60 should be \$1,277.00, No. 61 should be \$3,471.21; under Hillsborough county, No. 53 should be \$11,356.41; under Rockingham county, No. 62 should be \$9,222.44.

Page 204. Total of column 7 should be 165.

GENERAL SUGGESTIONS.

STATISTICS.

The failure of many school boards to understand the purport of the questions submitted to them has rendered the statistical reports unsatisfactory and unreliable for many years. It is believed, however, that the statistics given for the year ending August 1, 1902, are the most accurate that have ever been published. Boards have been required to correct all errors that could be discovered and to explain items that have aroused suspicion.

The decrease in the "number of schools having women teachers" is probably apparent rather than real, many boards having reported heretofore the number of teachers employed during the school year as of separate schools.

CONSOLIDATION.

One hundred five schools of less than six scholars are reported in the state, and four hundred sixty-four of from six to twelve scholars each.

While it is admitted that some of these small schools are necessarily continued because the physical features of the town present obstacles to a union of schools that cannot be overcome with reasonable effort, it remains a fact that in many cases the small school is maintained because of the selfish prejudices of a few people.

The small school is expensive financially and intellectually. It invites inefficient, untrained, unprepared teachers; fails to excite emulation; promotes stagnation. When possible,

the people should demand union, and conveyance of children at public expense. There are many towns in which several small schools are maintained, whose school problem could be solved by bringing their pupils to the central part of the town, and establishing a graded school. A new building for this purpose would prove a good investment in such cases. Children would be better cared for and better taught. Fewer teachers could do the work, and do it in a more satisfactory way than it can be done under present conditions.

People are apparently coming to understand the wastefulness of the very small schools, and their number is steadily diminishing.

SCHOOL ATTENDANCE.

The legislature of 1901 enacted amendments to the employment and compulsory attendance laws, which have had a marked effect in increasing the enrollment, membership, and attendance upon the public schools.

Your attention is specially invited to these items in the state summary for the years 1901-1902. A comparison of these items in the summary for the year ending August 1, 1900, the last complete year before the enactment of the law, with those for 1902, shows a gain of 1,562 in enrollment; a gain of 1,760 in average membership; and a gain of 2,004 in average daily attendance. The increase must be more than a coincidence, and seems a complete justification of the law. These figures show that the influence of the law has been felt even more in inducing regularity of attendance than in placing new pupils in school. The greater part of the increased enrollment is found in the factory towns and cities; the gain in regularity of attendance reaches to the rural sections, though the school boards in many instances are lamentably lax in the performance of the duty prescribed by section 18 of chapter 93 of the Public Statutes.

Nine prosecutions of parents for failure to send children to school have been instituted by the state under authority of the law of 1901.

The cost to the state for enforcement for the year ending August 1, 1902, was \$437.36. Mr. B. F. Dame has served as my deputy in the enforcement of the employment and attendance laws. He has performed the duties of the position with good judgment, and, I believe, to the general satisfaction of school boards and employers.

TEACHERS.

Certificates. The laws relative to certificates of qualification are mandatory not permissive.

“The school board shall select and hire suitable and competent teachers holding certificates as provided by law.”

“School boards shall, annually, in the month of June or July, and at such other times as they deem best, hold an examination of candidates for certificates of qualification to teach in the public schools.”

“Certificates issued [by the superintendent of public instruction] shall be accepted by school boards in lieu of personal examination.”

These requirements are sufficiently plain, but in the absence of any penalty for their violation, they are constantly and persistently disregarded. In the year ending August 1, 1901, the school boards of one hundred seventeen (117) towns reported that they did not observe them. In 1902, the boards of one hundred eight (108) towns made similar confessions.

I recommend that some way be devised for obtaining obedience to these statutes, or that they be repealed. It is a bad example to teachers and pupils, for school boards to be deliberate violators of the laws made to govern them.

There is a growing sentiment that the state should take entire charge of the certification of teachers. This sentiment has been fostered by the wilful disregard of the statutes quoted above.

I use the words “deliberate” and “wilful” advisedly, inasmuch as the attention of school boards is directed to this matter annually, and they are called upon to answer the questions:

“Do you hold an annual examination of candidates for teachers’ certificates, as required by chapter 92, section 6, of the Public Statutes?”

“Do you require candidates for teachers’ positions to hold certificates as provided by chapter 92, section 2, Public Statutes?”

A plan of certification by the state that would cause a minimum of inconvenience to teachers of successful experience would operate beneficially :

1. By making qualifications more uniform in the different towns.

Under the present law a certificate given by a school board is good only within the jurisdiction of the board issuing it.

2. By relieving teachers of the nervous strain necessitated by frequent examinations, in different towns.

3. By barring from the occupation such persons as are of insufficient scholastic acquirement to warrant an attempt to teach.

The State Teachers’ Association has voiced the sentiment of the progressive teachers of the state in the following resolution unanimously adopted :

“*Resolved*, That certification of teachers in the public schools should be by the state alone; that this association favors compulsory state certification on the basis of examination or of evidence of successful service, and that the teachers here assembled claim such certification as a professional right.”

State Examinations. Under the law of 1895, three examinations have been held each year. The following persons hold permanent state certificates :

LIST OF TEACHERS HOLDING PERMANENT STATE TEACHERS' CERTIFICATES.

Blanche N. Abbott	.	.	.	.	.	Laconia
Isabel E. Adams	.	.	.	.	.	Mill Village
Mary Abbie Adams	.	.	.	.	.	Gilsum
Hannah Ahern	.	.	.	.	.	Plymouth
Christabel Allen	.	.	.	.	.	Littleton
Edna Adelaide Allison	.	.	.	.	.	Flume House
Grace B. Applebee	.	.	.	.	.	Ashland
Bertha A. Arnstein	.	.	.	.	.	Dover
Martha L. Atkinson	.	.	.	.	.	Laconia
Andrew P. Averill	.	.	.	.	.	Reed's Ferry
Mildred E. Avery	.	.	.	.	.	East Washington
Gladys M. Baker	.	.	.	.	.	Ashland
Alura N. Barnes	.	.	.	.	.	St. Albans, Vt.
Eva J. Barney	.	.	.	.	.	Grafton
David B. Bartlett	.	.	.	.	.	Manchester
Mary E. Batchelder	.	.	.	.	.	Greenville
Lois D. Beck	.	.	.	.	.	Greenland
Frank Howe Benedict	.	.	.	.	.	Pittsfield
Vera E. Berry	.	.	.	.	.	Meredith
Charles W. Bickford	.	.	.	.	.	Manchester
Angie Bishop	.	.	.	.	.	Colebrook
Helen K. Bittinger	.	.	.	.	.	Haverhill
L. Estella Blood	.	.	.	.	.	Bradford
Fannie S. Blood	.	.	.	.	.	Greenville
Laura M. Blood	.	.	.	.	.	New Boston
Grace M. Bothell	.	.	.	.	.	Lancaster
Bessie P. Boutelle	.	.	.	.	.	Dorchester, Mass.
Annie C. Brierly	.	.	.	.	.	Dover
Daisy L. Bronson	.	.	.	.	.	Pattenville
Bertram D. Brown	.	.	.	.	.	Marlow
Grace M. Brown	.	.	.	.	.	Lakeport
Eva A. Brown	.	.	.	.	.	Nashua

Edith M. Bucklin	Canaan
Georgia A. Bullock	Tilton
Julia M. Burleigh	Laconia
Mary Edna Buswell	Chester
Margaret Butler	South Columbia
Tryphena M. Butterfield	Antrim
Martha A. Buzzell	Plymouth
Hattie L. Campbell	Plymouth
Katharine L. Carbee	Plymouth
Maude G. Carleton	Goffstown
Mabel G. Carley	Canaan Street
Helen B. Carr	Goffstown
Mabel A. Carruth	Manchester
Edgar D. Cass	Manchester
Ina M. Cheney	Somersworth
Florence A. Chesley	Freedom
Isa M. Clark	Danbury
Winifred Cochrane	Antrim
Dorothy M. Coleman	Newington
Nellie Collins	Rochester
Emily E. Cook	Rumney Depot
Mary R. Cook	East Washington
Isaac Copp	Alton
Mary Cotter	Manchester
Theresa C. Curran	Somersworth
Clinton Harvey Currier	Manchester
Anna Ardelle Dalton	Plymouth
Bertha L. Dame	Laconia
Elwin Damon	Lancaster
Mary B. Dane	New Boston
Valina J. Darling	Newport
Blanche M. Davis	St. Johnsbury, Vt.
Myrtle M. Davis	St. Johnsbury, Vt.
Walter I. Davis	Berlin Mills
Florence M. Dearborn	Campton Village
May F. Dickerson	Portsmouth
Colema L. Dickey	Ellensburg, Wash.

Nina M. Doanan	.	.	.	.	.	Greenville
Ethel A. Dodge	.	.	.	.	.	Andover
Winifred Dodge	.	.	.	.	.	New Boston
Marion E. Doe	.	.	.	.	.	Rumney
Katherine E. Donovan	.	.	.	.	.	Bethlehem
Jessie M. Dustin	.	.	.	.	.	Plymouth
Luella Eaton	.	.	.	.	.	Wells, Me.
Sarah A. Edgerley	.	.	.	.	.	Chocorua
Sarah M. Edmester	.	.	.	.	.	Boston
Mary C. Emery	.	.	.	.	.	Auburn
Mildred E. Emery	.	.	.	.	.	Canterbury
Amelia Emons	.	.	.	.	.	New Hampton
Lillian M. Eveleth	.	.	.	.	.	Gilmanton
Fannie Jane Everett	.	.	.	.	.	Atkinson
Florence Fassett	.	.	.	.	.	Lancaster
Mary A. Felsh	.	.	.	.	.	Ashuelot
Warren E. Fisher	.	.	.	.	.	Pittsfield
Effie M. Fitts	.	.	.	.	.	Hanover Center
Addie L. Flanders	.	.	.	.	.	New Hampton
Katharine O. Fletcher	.	.	.	.	.	Amherst, Mass.
Cora Follansbee	.	.	.	.	.	East Chester
Addie P. Forbes	.	.	.	.	.	Lancaster
Nellie M. Forbes	.	.	.	.	.	Lancaster
George E. Foss	.	.	.	.	.	Springfield, Mass.
Ione L. Foss	.	.	.	.	.	Laconia
Mary E. Foss	.	.	.	.	.	Tilton
Marion E. Fowle	.	.	.	.	.	Amherst
Carrie M. Fowler	.	.	.	.	.	South Newbury
Ida M. Fowler	.	.	.	.	.	Short Falls
Mabel M. Gardner	.	.	.	.	.	Warner
Lizabel Gay	.	.	.	.	.	Hillsborough Center
Millie K. Gile	.	.	.	.	.	Pembroke
Mary Z. Gillingham	.	.	.	.	.	South Newbury
Susie F. Goddard	.	.	.	.	.	Norwich, Vt.
Eva M. Godfrey	.	.	.	.	.	Northwood Center
Emma F. Gordon	.	.	.	.	.	Manchester
Eliza G. Gove.	.	.	.	.	.	Plymouth

Annie L. Gourley	.	.	.	.	.	Dunbarton
Gertrude J. Green	.	.	.	.	.	Chester
Jessie F. Grieves	.	.	.	.	.	Laconia
Mabel F. Griffin	.	.	.	.	.	Raymond
Barbara A. Gulliver	.	.	.	.	.	Manchester
Lillian F. Haines	.	.	.	.	.	North Hampton
Gertrude M. Hart	.	.	.	.	.	Laconia
Lulu Z. Hart	.	.	.	.	.	Laconia
Ethyle Hawkins	.	.	.	.	.	Laconia
Minna Hodge	.	.	.	.	.	Wolfeborough Falls
Bessie E. Hoyt	.	.	.	.	.	Concord
Edgar E. Hulse	.	.	.	.	.	Salem
Isaac Huse, Jr.	.	.	.	.	.	Manchester
Addie V. Jewell	.	.	.	.	.	West Newbury, Vt.
Florence L. Johnson	.	.	.	.	.	Newbury, Vt.
James H. Johnson	.	.	.	.	.	Bradford
Mabel Jordon	.	.	.	.	.	West Lebanon
Bessie B. Kinne	.	.	.	.	.	Littleton
Alonzo J. Knowlton	.	.	.	.	.	Plymouth
Myra Knowlton	.	.	.	.	.	Riverdale
Maude A. Lamprey	.	.	.	.	.	Manchester
S. Blanche Lamprey	.	.	.	.	.	Portsmouth
Myra F. Lane	.	.	.	.	.	Gilmanton
Ruth E. Lane	.	.	.	.	.	Gilmanton
Mabelle M. Lang	.	.	.	.	.	Lakeport
Ellen M. Lawlor	.	.	.	.	.	Lowell, Mass.
Grace E. Lawrence	.	.	.	.	.	Meredith
Fred S. Libbey	.	.	.	.	.	Warren
Phebe E. Libbey	.	.	.	.	.	Whitefield
Lena M. Liscom	.	.	.	.	.	Monument
Ada E. Longhead	.	.	.	.	.	Franklin Falls
Mary E. Lord	.	.	.	.	.	Boston, Mass.
Everett G. Loring	.	.	.	.	.	Hampton
Annie B. Lyon	.	.	.	.	.	Pelham
Ella Lillian Major	.	.	.	.	.	Laconia
Laura Helen Manderson	.	.	.	.	.	Gorham
Grace E. Marden	.	.	.	.	.	Short Falls

Mabel Marden	Suncook
Belle H. Marsh	Newmarket
Oriola E. Martin	Manchester
Lutie E. Mason	Laconia
Alta B. Maxwell	Dover
Abbie G. May	Barton, Vt.
Susan E. McAllister	Newbury Center, Vt.
S. H. McCollester	Marlborough
Mary McDonough	Dover
Ruby E. McIntire	Concord
Katherine M. McLaughlin	Laconia
Nettie P. Merrill	Warren
Etta M. Miller	Antrim
Benjamin S. Mooney	Rochester
M. Elsie Moore	Goffstown
Annie L. Morrison	Portsmouth
Grace E. Morse	Plymouth
Mary L. Mudgett	Lisbon
Ethel L. Muzzey	Antrim
Mary T. O'Connor	Concord
Annie T. Ordway	Penacook
Charles Osborne	North Weare
Margaret C. O'Shea	Laconia
Emma S. Page	Gilmanton
Josephine Page	Sanbornville
Norman J. Page	Pittsfield
Zetta M. Paige	Goffstown
Donna M. Palkey	Plymouth
Ida F. Pattee	Bristol
Wilhelmina Patterson	Salem, Mass.
Etta C. Pease	Penacook
Gertrude M. Perry	Portsmouth
Nellie F. Pierce	Portsmouth
L. Grace Pillsbury	Plymouth
Blanche M. Plaisted	Plymouth
Eliza R. Pratt	West Hartford, Vt.
Lela M. Pray	Bristol

Gertrude Randall	.	.	.	.	.	Penacook
Mary A. Redmond	.	.	.	.	.	Lancaster
Florence Reynolds	.	.	.	.	South Bolton, Que.	
Clinton J. Richards	.	.	.	.	.	Walpole
J. Sherman Richardson	.	.	.	.	.	Rochester
Mabel A. Richardson	.	.	.	.	.	Pelham
Eva A. Roberts	.	.	.	.	.	Plymouth
Blanche G. Rogers	.	.	.	.	.	Plymouth
Annie I. Rollins	.	.	.	.	.	Rochester
Bessie A. Rollins	.	.	.	.	.	Grafton
Maud Rowe	.	.	.	.	.	Franklin
Anna L. Rowell	.	.	.	.	.	Newton
Una R. Rowell	.	.	.	.	.	New London
Susan C. Russell	.	.	.	.	.	Plymouth
Myrtie B. Sanborn	.	.	.	.	.	Laconia
Emma L. Sanders	.	.	.	.	.	Laconia
Gertrude Sanders	.	.	.	.	.	Laconia
Alice Sargent	.	.	.	.	.	Plymouth
Grace O. Sargent	.	.	.	.	.	Plymouth
Gertrude E. Sawyer	.	.	.	.	.	North Weare
Alta B. Scruton	.	.	.	.	.	Gonic
Helen L. Seavey	.	.	.	.	.	Greenland
Minnie B. Shattuck	.	.	.	.	.	Laconia
Martha M. Shepard	.	.	.	.	.	Ashland
Ernest L. Silver	.	.	.	.	.	Rochester
Donna M. Slater	.	.	.	.	.	Rumney Depot
Maude E. Smart	.	.	.	.	.	Colebrook
Bertha G. Smith	.	.	.	.	.	West Derry
Mary L. Smith	.	.	.	.	.	South Acworth
Mattie M. Smith	.	.	.	.	.	Lakeport
Willis O. Smith	.	.	.	.	.	Lancaster
Mary Southwick	.	.	.	.	.	Marlboro'
Sarah E. Spalding	.	.	.	.	.	Rumney
Alice C. Spaulding	.	.	.	.	.	Somersworth
Fred L. V. Spaulding	.	.	.	.	.	Manchester
Kathrina E. Spencer	.	.	.	.	.	Hanover Center
Henry B. Stearns	.	.	.	.	.	Manchester

Ethel M. Stevens	.	.	.	.	.	Franklin Falls
Mary E. Stevens	.	.	.	.	.	Clinton Grove
Annie E. Stickney	.	.	.	.	.	Campton
Blanche L. Stirling	.	.	.	.	.	Dover
Hattie Stone	.	.	.	.	.	Plymouth
Phæbe E. Stone	.	.	.	.	.	Plymouth
Lena A. Stover	.	.	.	.	.	Kittery, Me.
Bertice Z. Streeter	.	.	.	.	.	Berlin
Edith L. Swain	.	.	.	.	.	Lakeport
Augusta M. Tappan	.	.	.	.	.	Concord
Cora Wood Taylor	.	.	.	.	.	Dalton
J. Maude Taylor	.	.	.	.	.	Center Effingham
Mary Emma Taylor	.	.	.	.	.	Alexandria
Lillian J. Thomas	.	.	.	.	.	Plymouth
Agnes Thompson	.	.	.	.	.	Lancaster
Isabel Thyng	.	.	.	.	.	Woodsville
Minnie B. Timson	.	.	.	.	.	Hyde Park, Mass.
Mae B. Tirrell	.	.	.	.	.	West Manchester
Bertha M. Tisdale	.	.	.	.	.	Manchester
Rachel E. Toas	.	.	.	.	.	Dover
Ethel A. Tobey	.	.	.	.	.	Plymouth
Oliver H. Toothaker	.	.	.	.	.	Berlin
Emily N. Tracy	.	.	.	.	.	Windsor, Vt.
Laura A. True	.	.	.	.	.	Hillsborough Bridge
Fannie J. Tucker	.	.	.	.	.	Colebrook
Clara B. Tuttle	.	.	.	.	.	Newbury Center, Vt.
Ethelyn A. Tuttle	.	.	.	.	.	North Nottingham
Ina Ethel Tuttle	.	.	.	.	.	Center Barnstead
Clara E. Upton	.	.	.	.	.	Nashua
Ross Vardon	.	.	.	.	.	Amesbury, Mass.
Lida Varney	.	.	.	.	.	Gonic
Annie M. Vose	.	.	.	.	.	Manchester
Martha B. Watson	.	.	.	.	.	Ashland
Arthur R. Webster	.	.	.	.	.	Warner
Nellie M. Wentworth	.	.	.	.	.	Milton
Eva M. Whalen	.	.	.	.	.	Bethlehem
George H. Whitcher	.	.	.	.	.	Durham

Jennie N. Whitcher	Lisbon
Louis L. Whitney	Lincoln, Mass.
Edwin J. Whittemore	Rochester
Sarah Morse Whitton	Wolfeborough
Maude Wiggin	Dover
Mary Ann Wight	Gilmanton
Harriette B. Wilder	Lancaster
Henrietta G. Wilder	Lancaster
Harriet Williamson	Manchester
Jennie Williamson	Manchester
George Winch	Manchester
Clara W. Winslow	East Boston, Mass.
Hervey L. Woodward	Bath
Lena C. Worthen	Melvin Mills
Nellie L. Wyman	Meriden
Addie Estelle Young	Franconia
Edith Belle Young	Franconia

Salaries. The average monthly wages of men teachers below the high school grade appears to have increased from \$38.75 in 1896, to \$43.58 in 1902; the reported increase of \$5.28 per month, from 1901 to 1902, is undoubtedly due in part to the high school law of 1901, which ruled out of the high school list many schools previously designated as high schools.

The average monthly wages of women teachers have increased from \$27.45 in 1896, to \$29.11 in 1902.

Grafton county reports the lowest salary list, viz., \$25.27 per month; Rockingham the highest, \$39.02. Among the individual towns, Rumney has employed a man at \$12 per month; the average monthly salary of the women teachers of Columbia, is \$15.73.

Any careful student of these figures will conclude that more must be raised for school purposes in many of our rural towns before the efficiency of the schools can be advanced. Efficient teachers cannot be hired for \$3 or \$4 a week.

TEXT-BOOKS AND SUPPLIES.

School boards are required by law to purchase all text-books and supplies needed for use in the public schools, at the expense of the town. They cannot use the school money for this purpose; nor can the town or district, by vote or by the appropriation of a specific sum, restrict the board in its purchases. The annual cost of this department varies widely in the different towns, ranging all the way from \$0.13 per pupil in Errol, to \$3.80 in Westmoreland. The average for the state is \$1.38.

The following table presents figures culled from the general statistics, in the hope that they may excite a greater interest in the equalization of school privileges and school taxation :

COUNTIES.	Average cost per pupil of total expenditure.	Average cost per pupil for books and supplies.	TOTAL EXPENDITURE.		COST OF BOOKS AND SUPPLIES.			
			Lowest average per pupil.	Highest average per pupil.	Lowest average per pupil.	Highest average per pupil.		
Belknap	\$17.21	\$1.15	Tilton	\$11.75	Barnstead.....	\$15.79	Tilton.....	\$1.41
Carroll.....	14.50	.91	Brookfield	9.97	Wolfeborough...	20.28	Jackson } Tamworth }	1.50
Cheshire.....	18.98	1.64	Gilsum.....	10.47	Dublin.....	28.89	Westmoreland	3.80
Coös	16.34	1.13	Errol.....	6.66	Berlin.....	21.85	Carroll	1.80
Grafton.....	16.86	1.26	Easton.....	7.02	Groton	25.00	Dorchester .....	.31
Hillsborough ...	23.55	1.49	Brookline.....	11.58	Mont Vernon ...	32.54	Windor .....	.37
Merrimack	18.50	1.50	Andover	10.05	Henniker.....	22.70	Wilmot.....	.22
Rockingham ...	18.67	1.41	Kensington.....	5.75	Portsmouth.....	28.00	Kensington.....	.27
Strafford.....	19.70	1.39	Barrington.....	13.00	Farmington	25.57	New Durham ..	.73
Sullivan	10.49	1.31	Washington	8.10	Charlestown.....	22.34	Croydon .....	.47
							Lempster	1.62

HIGH SCHOOLS.

Since the repeal of the law requiring certain towns to maintain "grammar schools" to "fit youth for the university," in 1807, there has been no legal requirement for secondary education in New Hampshire until the legislature of 1901 enacted a law known as the "High School law." The text of the statute is given in full:

AN ACT RELATING TO HIGH SCHOOLS.

SECTION 1. Any town not maintaining a high school or school of corresponding grade shall pay for the tuition of any child who with parents or guardian resides in said town and who attends a high school or academy in the same or another town or city in this state, and the parent or guardian of such child shall notify the school board of the district in which he resides of the high school or academy which he has determined to attend.

SECT. 2. If any town in which a high school or school of corresponding grade is not maintained neglects or refuses to pay for tuition as provided in the preceding section, such town shall be liable therefor to the parent or guardian of the child furnished with such tuition, if the parent or guardian has paid the same, or to the town or city furnishing the same in an action of contract.

SECT. 3. Five thousand dollars shall be appropriated annually from the state treasury for the payment of tuition in high schools and academies, to be paid by the state treasurer in the month of December of each year to the treasurers of such towns as are entitled, and in such manner as is hereinafter provided, upon a sworn certificate of the superintendent of public instruction of the sums due.

Towns whose rate of taxation for school purposes in any year is \$3.50 or more on \$1,000, and whose average rate of taxation for all purposes for five years next preceding is \$16.50 or more on \$1,000 shall receive a share of said appropriation as follows:

If the tax rate is from \$16.50 to \$17.49, one tenth of the tuition paid.

If the tax rate is from \$17.50 to \$18.49, two tenths of the tuition paid.

If the tax rate is from \$18.50 to \$19.49, three tenths of the tuition paid.

If the tax rate is from \$19.50 to \$20.49, four tenths of the tuition paid.

If the tax rate is from \$20.50 to \$21.49, five tenths of the tuition paid.

If the tax rate is from \$21.50 to \$22.49, six tenths of the tuition paid.

If the tax rate is from \$22.50 to \$23.49, seven tenths of the tuition paid.

If the tax rate is from \$23.50 to \$24.49, eight tenths of the tuition paid.

If the tax rate is from \$24.50 to \$25.49, nine tenths of the tuition paid.

Over \$25.49, the whole of such tuition.

If more than \$5,000 should be needed in any year for the purposes of this act, the said \$5,000 shall be distributed pro rata to the towns entitled to receive the same, in accordance with the foregoing classification.

SECT. 4. By the term "high school" or "academy," as used in this act, is understood a school having at least one four years' course, properly equipped and teaching such subjects as are required for admission to college, technical school, and normal school, such high school or academy to be approved by the state superintendent of public instruction as complying with the requirements of this section.

SECT. 5. Towns paying tuition of scholars in high schools or academies shall receive a proportionate share of the literary fund for the attendance of such pupils. All academies and private schools shall be furnished with copies of the school register, and shall make an annual statistical report to the state superintendent.

SECT. 6. This act shall take effect August 1, 1901.

This law was enacted in response to a demand from the people. For several sessions bills have been introduced in the house of representatives calculated to equalize opportunities for high school instruction. These have failed by reason of their crudities or because they seemed to impose too heavy a burden upon the smaller towns.

The division of the expense among the town, the state, and the parent removed all objections, and every boy and girl in the state has an opportunity to obtain high school instruction whenever they are qualified to profit by it.

No law has ever been placed upon the statute books of New Hampshire calculated to give a greater intellectual uplift than this.

APPROVED SCHOOLS.

Pursuant to section 4, the following high schools and academies have been approved, and they are entitled to collect from the town the tuition charges of all pupils qualified to enter upon their approved courses and admitted thereto :

Alton, High School,	Isaac Copp.
Amherst, High School,	Harriet E. Park.
Antrim, High School,	Charles S. Paige.
Andover, Proctor Academy,	Rev. James McCann.
Atkinson, Academy,	H. N. Dunham.
Berlin, High School,	Frank B. Wight.
Bethlehem, High School,	Samuel A. Burleigh.
Claremont, High School,	L. S. Dewey.
Colebrook, Academy and High School,	James Monohon.
Concord, High School,	Frederick W. Doring.
Derry, Pinkerton Academy,	George W. Bingham.
Dover, High School,	William J. Rushmore.
Exeter, Robinson Seminary,	George N. Cross.
Farmington, High School,	Charles F. Towne.
Francestown, Academy,	Frank W. Cady.
Franconia, Dow Academy,	Leon A. Martin.
Franklin, High School,	Leslie L. Cleveland.

Gilmanton, Academy,	Ralph F. Kent.
Goffstown, High School,	Walter B. Pierce.
Gorham, High School,	Edward P. Williams.
Hampton, Academy,	Everett G. Loring.
Hanover, High School,	William B. Woodbury.
Haverhill, High School and Academy,	C. H. Martin.
Henniker, High School,	Louis DeW. Record.
Hillsborough, High School,	Rufus B. Barton.
Hinsdale, High School,	D. L. Fisher.
Holderness, School for Boys,	Rev. Lorin Webster.
Jaffrey (East), High School,	William H. Flint.
Keene, High School,	Robert A. Ray.
Kingston, Sanborn Seminary,	Z. Willis Kemp.
Laconia, High School,	E. W. Butterfield.
Lancaster, High School,	Willis O. Smith.
Lebanon, High School,	Robert Forsyth.
Lisbon, High School,	Charles L. Wallace.
Littleton, High School,	Melville C. Smart.
Manchester, High School,	George H. Libbey.
Meriden, Kimball Union Academy,	Ernest R. Woodbury.
Merrimack, McGaw Institute,	David F. Carpenter.
Milford, High School,	Robert J. Sisk.
Milton, Nute High School,	Arthur D. Wiggin.
Mont Vernon, McCollom Institute,	Rev. Henry P. Peck.
Nashua, High School,	Lemuel S. Hastings.
New Hampton, Literary Institute,	Frank W. Preston.
New London, Colby Academy,	Rev. Horace G. McKean.
Newmarket, High School,	Alexander B. Crawford.
Newport, High School,	Frederick Heyward.
Northwood, Seminary,	Loring G. Williams.
Northwood, Coe's Academy,	Edwin K. Welch.
Pembroke, Academy,	Isaac Walker.
Peterborough, High School,	Frank E. Mason.
Pittsfield, High School,	Norman J. Page.
Plymouth, High School,	Newton D. Clark.
Portsmouth, High School,	Allen H. Knapp.

Rochester, High School,	Frederick G. Getchell.
Somersworth, High School,	Chauncey C. Ferguson.
Strafford, Austin Academy,	A. E. Thomas.
Tilton, Conference Seminary,	George L. Plimpton.
Walpole, High School,	Franklin E. Heald.
Warner, High School,	Fred S. Libbey.
Whitefield, High School,	Harry S. Moore.
Wilton, High School,	Henry H. Pratt.
Winchester, High School,	Vryling W. Buffum.
Woodsville, High School,	Samuel W. Robertson.

Section 3 of the law makes it necessary to average for five years the general tax rate of all towns furnishing pupils to approved academies and to approved high schools situated in other towns, as well as to compute the rate of school taxation. I annex the result of both computations :

TOWN.	Average rate of taxation on \$1,000 for five years preceding 1902.
1. Dorchester	\$29.10
2. Albany	28.66
3. Dalton	28.63
4. Thornton	28.22
5. Groton	27.10
6. Springfield	27.08
7. Barrington	26.30
8. Ellsworth	26.22
9. Woodstock	25.40
10. Littleton	25.08
11. Berlin	24.56
12. Farmington	23.76
13. Meredith	23.70
14. New Durham	23.30
15. Eaton	23.18
16. Lancaster	23.16
17. Newport	22.88
18. Haverhill	22.82

19.	Bartlett	.	.	.	.	.	.	\$22.46
20.	Chatham	.	.	.	.	.	.	22.18
21.	Madison	.	.	.	.	.	.	22.12
22.	Gorham	.	.	.	.	.	.	22.00
22.	Randolph	.	.	.	.	.	.	22.00
24.	Middleton	.	.	.	.	.	.	21.78
25.	Whitefield	.	.	.	.	.	.	21.72
26.	Sandwich	.	.	.	.	.	.	21.64
27.	New Hampton	.	.	.	.	.	.	21.57
28.	Derry	.	.	.	.	.	.	21.48
29.	Bethlehem	.	.	.	.	.	.	21.46
30.	Orange	.	.	.	.	.	.	21.44
31.	Wolfeborough	.	.	.	.	.	.	21.38
32.	Campton	.	.	.	.	.	.	21.30
33.	Lempster	.	.	.	.	.	.	21.28
33.	Seabrook	.	.	.	.	.	.	21.28
33.	Tamworth	.	.	.	.	.	.	21.28
33.	Alton	.	.	.	.	.	.	21.28
37.	Laconia	.	.	.	.	.	.	21.26
37.	Antrim	.	.	.	.	.	.	21.26
39.	Somersworth	.	.	.	.	.	.	21.24
40.	Jefferson	.	.	.	.	.	.	21.10
40.	Portsmouth	.	.	.	.	.	.	21.10
42.	Nashua	.	.	.	.	.	.	21.04
43.	Milan	.	.	.	.	.	.	21.00
44.	Lisbon	.	.	.	.	.	.	20.78
45.	Salem	.	.	.	.	.	.	20.76
46.	Lyme	.	.	.	.	.	.	20.72
47.	Alexandria	.	.	.	.	.	.	20.64
48.	Northumberland	.	.	.	.	.	.	20.60
48.	Plymouth	.	.	.	.	.	.	20.60
50.	Wentworth	.	.	.	.	.	.	20.58
51.	Bristol	.	.	.	.	.	.	20.56
52.	Orford	.	.	.	.	.	.	20.54
52.	Hillsborough	.	.	.	.	.	.	20.54
54.	Claremont	.	.	.	.	.	.	20.50
55.	Concord	.	.	.	.	.	.	20.46

56.	Carroll	.	.	.	.	.	\$20.30
57.	Pittsfield	.	.	.	.	.	20.16
58.	Tuftonborough	.	.	.	.	.	20.14
59.	Strafford	.	.	.	.	.	20.08
60.	Barnstead	.	.	.	.	.	20.04
60.	Gilmanton	.	.	.	.	.	20.04
62.	Rochester	.	.	.	.	.	20.00
63.	Bath	.	.	.	.	.	19.98
64.	Boscawen	.	.	.	.	.	19.79
65.	Bridgewater	.	.	.	.	.	19.78
66.	Dover	.	.	.	.	.	19.76
67.	Manchester	.	.	.	.	.	19.72
68.	Belmont	.	.	.	.	.	19.60
68.	Milford	.	.	.	.	.	19.60
70.	Brookfield	.	.	.	.	.	19.48
71.	Tilton	.	.	.	.	.	19.40
72.	Hinsdale	.	.	.	.	.	19.36
73.	Pittsburg	.	.	.	.	.	19.30
73.	Strafford	.	.	.	.	.	19.30
75.	Effingham	.	.	.	.	.	19.28
75.	Wentworth's Location	.	.	.	.	.	19.28
77.	Lebanon	.	.	.	.	.	19.24
78.	Epping	.	.	.	.	.	19.18
79.	Exeter	.	.	.	.	.	19.16
80.	Newmarket	.	.	.	.	.	19.04
80.	Acworth	.	.	.	.	.	19.04
82.	Henniker	.	.	.	.	.	18.96
83.	Peterborough	.	.	.	.	.	18.92
84.	Bennington	.	.	.	.	.	18.86
85.	Unity	.	.	.	.	.	18.84
86.	Holderness	.	.	.	.	.	18.80
86.	Greenfield	.	.	.	.	.	18.80
88.	Errol	.	.	.	.	.	18.70
89.	Goshen	.	.	.	.	.	18.60
90.	Nottingham	.	.	.	.	.	18.58
91.	Franklin	.	.	.	.	.	18.50
92.	Clarksville	.	.	.	.	.	18.42

93.	Sullivan	.	.	.	.	.	\$18.36
94.	Ossipee	.	.	.	.	.	18.34
94.	Raymond	.	.	.	.	.	18.34
96.	Enfield	.	.	.	.	.	18.26
97.	Newfields	.	.	.	.	.	18.24
98.	Dummer	.	.	.	.	.	18.20
99.	Grantham	.	.	.	.	.	18.12
100.	Rumney	.	.	.	.	.	18.06
101.	Milton	.	.	.	.	.	18.02
102.	Northwood	.	.	.	.	.	18.00
103.	Richmond	.	.	.	.	.	17.96
104.	Sanbornton	.	.	.	.	.	17.90
105.	Deering	.	.	.	.	.	17.88
105.	Salisbury	.	.	.	.	.	17.88
107.	Stark	.	.	.	.	.	17.78
108.	Stewartstown	.	.	.	.	.	17.70
109.	Sunapee	.	.	.	.	.	17.67
110.	Canaan	.	.	.	.	.	17.66
111.	Conway	.	.	.	.	.	17.64
112.	Warner	.	.	.	.	.	17.60
113.	Freedom	.	.	.	.	.	17.54
114.	Troy	.	.	.	.	.	17.52
115.	Wilmot	.	.	.	.	.	17.50
115.	Newton	.	.	.	.	.	17.50
115.	Plaistow	.	.	.	.	.	17.50
118.	Kingston	.	.	.	.	.	17.42
119.	Fitzwilliam	.	.	.	.	.	17.40
119.	Shelburne	.	.	.	.	.	17.40
121.	Wakefield	.	.	.	.	.	17.22
121.	Ashland	.	.	.	.	.	17.22
123.	Hanover	.	.	.	.	.	17.17
124.	Hebron	.	.	.	.	.	17.11
125.	Moultonborough	.	.	.	.	.	17.04
126.	Winchester	.	.	.	.	.	17.02
127.	Temple	.	.	.	.	.	16.96
127.	Newcastle	.	.	.	.	.	16.96
129.	Lyman	.	.	.	.	.	16.80

129.	Wilton	.	.	.	.	.	.	\$16.80
131.	Brookline	.	.	.	.	.	.	16.78
132.	Croydon	.	.	.	.	.	.	16.74
133.	Stoddard	.	.	.	.	.	.	16.68
133.	Candia	.	.	.	.	.	.	16.68
135.	Gilford	.	.	.	.	.	.	16.66
135.	Deerfield	.	.	.	.	.	.	16.66
137.	New Ipswich	.	.	.	.	.	.	16.62
138.	Walpole	.	.	.	.	.	.	16.50
138.	Epsom	.	.	.	.	.	.	16.50
138.	Hill	.	.	.	.	.	.	16.50
141.	Amherst	.	.	.	.	.	.	16.46
142.	New London	.	.	.	.	.	.	16.45
143.	Colebrook	.	.	.	.	.	.	16.44
143.	Sutton	.	.	.	.	.	.	16.44
145.	Benton	.	.	.	.	.	.	16.42
145.	Sharon	.	.	.	.	.	.	16.42
147.	Hollis	.	.	.	.	.	.	16.26
148.	Warren	.	.	.	.	.	.	16.10
149.	Plainfield	.	.	.	.	.	.	16.04
150.	New Boston	.	.	.	.	.	.	16.02
151.	Columbia	.	.	.	.	.	.	15.96
152.	Marlborough	.	.	.	.	.	.	15.90
153.	Piermont	.	.	.	.	.	.	15.84
153.	Hancock	.	.	.	.	.	.	15.84
155.	Charlestown	.	.	.	.	.	.	15.80
156.	Jackson	.	.	.	.	.	.	15.79
157.	Cornish	.	.	.	.	.	.	15.78
158.	Danville	.	.	.	.	.	.	15.76
159.	Gilsum	.	.	.	.	.	.	15.72
159.	Danbury	.	.	.	.	.	.	15.72
161.	Harrisville	.	.	.	.	.	.	15.70
162.	Franconia	.	.	.	.	.	.	15.60
162.	Hampton	.	.	.	.	.	.	15.60
164.	Rollinsford	.	.	.	.	.	.	15.58
165.	Nelson	.	.	.	.	.	.	15.56
166.	Landaff	.	.	.	.	.	.	15.46

167.	Canterbury	.	.	.	.	.	\$15.22
168.	Pembroke	.	.	.	.	.	15.18
169.	Hudson	.	.	.	.	.	15.16
169.	Sandown	.	.	.	.	.	15.16
171.	Keene	.	.	.	.	.	15.12
172.	Mont Vernon	.	.	.	.	.	15.06
173.	Londonderry	.	.	.	.	.	15.04
174.	Roxbury	.	.	.	.	.	15.02
174.	Lyndeborough	.	.	.	.	.	15.02
174.	Hampstead	.	.	.	.	.	15.02
174.	Washington	.	.	.	.	.	15.02
178.	Center Harbor	.	.	.	.	.	14.98
179.	Weare	.	.	.	.	.	14.96
180.	Hooksett	.	.	.	.	.	14.70
181.	Francestown	.	.	.	.	.	14.68
182.	Chester	.	.	.	.	.	14.50
182.	Greenville	.	.	.	.	.	14.50
184.	Marlow	.	.	.	.	.	14.48
185.	Loudon	.	.	.	.	.	14.47
186.	Hopkinton	.	.	.	.	.	14.34
187.	Monroe	.	.	.	.	.	14.20
188.	Andover	.	.	.	.	.	14.16
188.	Chichester	.	.	.	.	.	14.16
190.	Swanzey	.	.	.	.	.	14.14
191.	Jaffrey	.	.	.	.	.	14.00
192.	Windsor	.	.	.	.	.	13.98
193.	Grafton	.	.	.	.	.	13.94
194.	Merrimack	.	.	.	.	.	13.86
195.	Durham	.	.	.	.	.	13.75
196.	Stratham	.	.	.	.	.	13.62
197.	Windham	.	.	.	.	.	13.60
197.	Lee	.	.	.	.	.	13.60
199.	Newington	.	.	.	.	.	13.57
200.	Goffstown	.	.	.	.	.	13.56
201.	South Hampton	.	.	.	.	.	13.52
202.	Bow	.	.	.	.	.	13.50
203.	Greenland	.	.	.	.	.	13.46

204.	Rye	\$13.38
205.	Hampton Falls	13.36
206.	Alstead	13.30
207.	Dunbarton	13.26
208.	Auburn	13.20
209.	Rindge	13.18
210.	Northfield	13.17
211.	Westmoreland	13.00
211.	Pelham	13.00
211.	Madbury	13.00
214.	Newbury	12.98
215.	Atkinson	12.78
216.	Mason	12.74
217.	Chesterfield	12.70
218.	Bedford	12.64
219.	Kensington	12.42
220.	Webster	12.36
221.	Fremont	12.26
222.	Allenstown	12.16
223.	Langdon	12.04
224.	Bradford	12.02
225.	East Kingston	11.86
226.	Surry	11.74
227.	Brentwood	11.70
228.	Litchfield	11.56
229.	Lincoln	11.48
230.	North Hampton	11.40
231.	Dublin	11.24
232.	Easton	11.08
233.	Waterville	10.32
234.	Hart's Location	4.86

School District.	Rate of taxation on \$1,000 for school purposes, 1902.	* Class.
1. Woodsville,	\$13.04	High School.
2. Bath, special,	11.22	5
3. Lisbon, special,	9.95	High School.
4. Concord, Penacook,	9.13	4
5. Antrim,	8.79	High School.
6. Lebanon, West,	8.08	0
7. Bath, town,	7.62	4
8. Hinsdale,	7.54	High School.
9. Northfield,	7.33	0
10. Albany,	7.29	10
11. Chatham,	7.00	6
12. Stratford,	6.85	3
13. Meredith, special,	6.79	8
14. Tilton, special,	6.69	3
14. Windsor,	6.69	0
16. Jefferson,	6.65	5
17. Hill,	6.53	1
18. Gorham,	6.49	High School.
19. Derry, special,	6.39	5
20. Milford,	6.38	High School.
21. Lancaster, special,	6.33	"
22. Franklin,	6.30	"
23. Bristol, town,	6.11	5
24. Wakefield,	6.09	1
25. Newmarket,	6.04	High School.
25. Walpole,	6.04	High School.
27. Andover,	5.99	0
28. Plymouth,	5.94	High School.
29. Ashland, town,	5.87	1
30. Concord, union,	5.80	High School.
31. Hillsborough, town,	5.77	5
32. Whitefield, special,	5.75	High School.
33. Wilton,	5.70	High School.

* The figures show the number of tenths of tuition paid by towns, which they receive from the state treasury.

34. Hampstead,	\$5.64	0
35. Hampton Falls,	5.58	0
36. Hanover, town,	5.54	1
36. Bethlehem, special,	5.54	High School.
38. Canaan, special,	5.52	2
39. Newfields,	5.45	2
40. Somersworth,	5.41	High School.
41. Thornton,	5.40	10
42. Rochester,	5.39	High School.
43. Amherst,	5.33	0
44. Madison,	5.31	6
45. Pittsfield,	5.23	High School.
46. Goffstown, special,	5.21	High School.
47. Seabrook,	5.19	5
48. Ellsworth,	5.13	10
49. Winchester,	5.12	High School.
50. Alton,	5.11	High School.
51. Sutton,	5.07	0
52. Londonderry,	5.05	0
53. Orford,	5.04	5
54. Littleton, town,	5.02	9
55. Chichester,	5.00	0
56. Keene, town,	4.99	0
57. Hooksett,	4.98	0
58. Laconia,	4.95	High School.
59. Belmont,	4.93	4
60. Wentworth,	4.91	5
61. Farmington, special,	4.88	High School.
62. Alexandria,	4.83	5
63. Salem,	4.82	5
64. Meredith, town,	4.80	8
65. Hillsborough, special,	4.74	High School.
66. Sullivan,	4.73	2
67. Henniker,	4.70	High School.
68. Orange,	4.67	5
68. Ashland, special,	4.67	1
70. Lancaster, town,	4.65	7

71. Newport,	\$4.63	High School.
72. Northumberland,	4.60	5
73. Ossipee,	4.58	2
74. Nashua,	4.57	High School.
75. Conway,	4.55	2
76. Keene, special,	4.54	High School.
77. Rollinsford, special,	4.53	0
78. Rumney,	4.52	2
78. Lyme,	4.52	5
80. Hudson,	4.51	0
81. Troy,	4.50	2
82. Concord, town,	4.47	4
83. Dalton,	4.46	10
84. Groton,	4.45	10
85. Enfield, town,	4.43	2
86. Berlin,	4.42	High School.
86. Plaistow,	4.42	2
88. Deerfield,	4.41	1
89. Hanover, special,	4.37	High School.
90. Bridgewater,	4.36	4
90. Danville,	4.36	0
92. Charlestown,	4.35	0
92. Claremont,	4.35	High School.
94. North Hampton,	4.27	0
95. Manchester,	4.25	High School.
95. Sanbornton,	4.25	2
97. Weare,	4.20	0
98. Durham,	4.19	0
98. Enfield, special,	4.19	2
98. Webster,	4.19	0
101. Peterborough,	4.18	High School.
102. Epping,	4.17	3
103. Greenland,	4.14	0
104. Jaffrey,	4.13	0
105. Gilsum,	4.12	0
106. Loudon,	4.09	0
106. Wilmot,	4.09	2

108. Exeter,	\$4.06	3
109. Chester,	4.05	0
109. Swanzey,	4.05	0
111. Portsmouth,	4.01	High School.
112. Windham,	4.00	0
112. Pittsburg,	4.00	3
112. Eaton,	4.00	7
115. Fremont,	3.99	0
115. Bradford, town,	3.99	0
117. Benton,	3.98	0
118. Greenfield,	3.92	3
119. Fitzwilliam,	3.90	1
119. Piermont,	3.90	0
121. Bethlehem, town,	3.89	5
121. Easton,	3.89	0
123. Rollinsford, town,	3.88	0
123. Grafton,	3.88	0
123. Barnstead,	3.88	4
123. Epsom,	3.88	1
127. Barrington,	3.85	10
127. Effingham,	3.85	3
127. Freedom,	3.85	2
130. Milan,	3.84	5
131. Raymond,	3.81	2
132. Goffstown, town,	3.80	0
133. Littleton, special,	3.79	High School.
133. Warner,	3.79	High School.
135. Dorchester,	3.77	10
135. Candia,	3.77	1
135. Lisbon, town,	3.77	5
138. Newton,	3.76	2
139. Chesterfield,	3.75	0
139. Marlborough,	3.75	0
139. Bow,	3.75	0
139. Canaan, town,	3.75	2
143. Salisbury,	3.74	2
143. New Hampton,	3.74	6
143. Harrisville,	3.74	0

146. Pelham,	\$3.72	0
146. Stewartstown, town,	3.72	2
148. Franconia,	3.67	0
149. Marlow,	3.63	0
150. Carroll,	3.62	4
150. Acworth,	3.62	3
152. Dunbarton,	3.60	0
153. Dover,	3.59	High School.
154. Bedford,	3.58	0
154. Bennington,	3.58	3
156. Holderness,	3.56	3
157. Madbury,	3.55	0
157. Springfield,	3.55	10
159. Sandwich,	3.53	6
159. Atkinson,	3.53	0
159. Merrimack,	3.53	0
162. Tilton, town,	3.52	3
163. Danbury,	3.51	0
164. Randolph,	3.50	6
164. Westmoreland,	3.50	0
166. Farmington, town,	3.49	0
166. Middleton,	3.49	0
166. New Boston,	3.49	0
169. Francestown,	3.48	0
169. Moultonborough,	3.48	0
169. Canterbury,	3.48	0
172. Auburn,	3.47	0
173. Gilmanton,	3.46	0
174. Rye,	3.44	0
174. Hollis,	3.44	0
174. Sharon,	3.44	0
177. Hancock,	3.43	0
178. Bristol, special,	3.42	0
179. Landaff,	3.39	0
180. Stoddard,	3.37	0
181. Alstead,	3.33	0
182. Center Harbor,	3.32	0
183. Lempster,	3.31	0

184. Litchfield,	\$3.30	0
185. Strafford,	3.29	0
186. Monroe,	3.28	0
187. Goshen,	3.26	0
188. Unity,	3.22	0
189. Northwood,	3.21	0
189. Stratham,	3.21	0
191. Jackson, town,	3.20	0
191. Jackson, special,	3.20	0
193. Lyndeborough,	3.18	0
193. Stark,	3.18	0
193. Columbia,	3.18	0
196. Cornish,	3.15	0
197. Brookline,	3.14	0
198. Greenville,	3.13	0
199. Dummer,	3.12	0
199. Sandown,	3.12	0
201. Campton,	3.11	0
202. Bradford, special,	3.10	0
202. Temple,	3.10	0
202. Mont Vernon,	3.10	0
202. Hopkinton,	3.10	0
206. Woodstock,	3.07	0
206. New London,	3.07	0
208. Lee,	3.06	0
209. Milton,	3.05	0
210. Mason,	3.03	0
211. Whitefield, town,	3.01	0
212. Wentworth's Location,	3.00	0
213. Brentwood,	2.97	0
213. Newington,	2.97	0
215. New Ipswich,	2.93	0
215. Sunapee,	2.93	0
217. Brookfield,	2.90	0
217. Hebron,	2.90	0
219. Pembroke,	2.85	0
219. Kingston,	2.85	0
221. Rindge,	2.84	0

221. Deering,	\$2.84	o
221. Lyman,	2.84	o
224. New Durham,	2.83	o
224. Richmond,	2.83	o
224. Gilford,	2.83	o
227. Tuftonborough,	2.81	o
228. Croydon,	2.77	o
229. Newbury,	2.74	o
229. Lebanon, town,	2.74	o
231. Kensington,	2.73	o
232. Wolfeborough,	2.72	o
233. Lebanon High School,	2.64	High School.
234. Lisbon, Sugar Hill,	2.62	o
235. Washington,	2.58	o
235. Surry,	2.58	o
237. Derry, town,	2.55	o
238. Bartlett, town,	2.51	o
238. Bartlett, special,	2.51	o
240. Hampton,	2.50	
240. Langdon,	2.50	o
242. Plainfield,	2.48	o
243. Warren,	2.47	o
244. Nelson,	2.39	o
245. Errol,	2.38	o
246. Allenstown,	2.37	o
247. Lincoln,	2.33	o
248. East Kingston,	2.31	o
249. Roxbury,	2.29	o
249. Tamworth,	2.29	o
251. Newcastle,	2.27	o
252. Stewartstown, special,	2.24	o
252. Colebrook, special,	2.24	o
254. Colebrook, town,	2.23	o
255. Grantham,	2.22	o
256. Shelburne,	2.20	o
257. Clarksville,	2.09	o
258. Nottingham,	2.06	o
259. Dublin,	1.85	o

DECISION OF COURT.

Question arising as to the proper interpretation of the word "town" as it appears in the law, a case was made by the Union School District of Concord against Penacook District of the same city. The case was transferred to the Supreme Court which made the following decision :

"No. 101. Merrimack. Union School District vs. District No. 20.

"Assumpsit for tuitions of children who, with their parents or guardians, reside in the defendant district, and who attend the high school of the plaintiff district.

"The defendant district does not maintain a high school, or one of a grade corresponding to the plaintiffs' high school. The respective parents or guardians of the children attending said high school notified the defendants' school board of the purpose of said children to attend said school. The defendants decline to pay said tuitions, or any of them, claiming that the same should be paid by the city of Concord.

"There are three school districts in Concord, namely, Union School District, District No. 20, and the Town District.

"Transferred from the superior court, by Stone, J.

"Mitchell & Foster for the plaintiffs.

"David F. Dudley for the defendants.

"Edmund S. Cook, solicitor for Concord.

"BLODGETT, C. J. The sole contention of the defendant district is that the tuitions of the children resident therein who attend the high school of the plaintiff district should be paid by the city of Concord, in which both districts are situate.

"We are unable to find any tenable basis for this contention. So far as appears, and as we take the fact to be, each district has 'a special, independent, and complete organization, and officers of its own having exclusive authority for the superintendence and government of its schools and the

administration of all its school affairs,' and is a distinct and separate organization and corporation, not merely as to each other, but as to the city of Concord. *Sargent v. District*, 63 N. H. 528, 530, 533, 534; *Wheeler v. Alton*, 68 N. H. 478.

"With these relations and conditions existing, it would not only be obviously unjust to subject the city to the payment of tuition at the plaintiffs' high school for children resident in the defendant district, which has authority to establish and maintain a high school of its own (P. S., c. 89, s. 9), but we think the parties fairly come within the meaning of 'town,' as used in chapter 96, Laws of 1901, enacting that 'any town not maintaining a high school or school of corresponding grade shall pay for the tuition of any child who, with parent or guardian, resides in said town, and who attends a high school or academy in the same or another town or city in this state, and the parent or guardian of such child shall notify the school board of the district in which he resides of the high school or academy which he has determined to attend.'

"This construction not only accords with the requirements of justice and the well-recognized independent corporate powers of school districts and the historical evidence, but it is also authorized by *Sargent v. District* and *Wheeler v. Alton*, *supra*, and by section 5, chapter 2, of the Public Statutes, which provides: 'The word "town" shall extend and be applied to any place incorporated, or whose inhabitants are required to pay any tax, and shall mean that city, town, ward, or place in which the subject-matter referred to is situate, or in which the persons referred to are resident, unless from the context a different intention is manifest.' But, apart from these considerations, towns, as such, not being authorized to maintain high schools, and having no boards of education, it is manifest, from the act of 1901 itself, that the construction adopted is the correct one.

"The plaintiffs' action is maintainable. Case discharged.

"All concurred."

This decision, that the school district is liable, has made it necessary to compute the rate of school taxation for each school district. It has seemed at times impossible to obtain the necessary data from some of the district officers, but the list has finally been completed, and apportionment from the state appropriation has been made as follows :

APPORTIONMENT OF HIGH SCHOOL FUND.

Acworth	\$14.70
Alexandria	16.00
Ashland	58.17
Barnstead	121.40
Barrington	338.27
Bath	34.70
Belmont	102.06
Bennington	34.20
Boscawen	104.40
Bridgewater	58.80
Bristol	329.83
Canaan	33.80
Candia	3.00
Carroll	15.52
Concord (Penacook District)	276.00
Concord (Town)	60.00
Dalton	107.40
Deerfield	23.49
Dorchester	58.50
Enfield (Special)	4.40
Epping	40.65
Epsom	21.29
Fitzwilliam	6.00
Freedom	13.20
Greenfield	72.00
Hanover (Town)	10.60
Hill	14.86
Hillsborough (Town)	53.25
Holderness	38.49
Lisbon (Town)	99.75

Littleton (Town)	.	.	.	.	\$90.90
Lyme . . . . .	.	.	.	.	73.00
Madison . . . . .	.	.	.	.	14.40
Marlborough . . . . .	.	.	.	.	7.00
Meredith (Town)	.	.	.	.	59.60
Meredith (Special)	.	.	.	.	124.80
Milan . . . . .	.	.	.	.	2.50
Newfields . . . . .	.	.	.	.	8.00
New Hampton . . . . .	.	.	.	.	423.30
Newton . . . . .	.	.	.	.	19.00
North Hampton . . . . .	.	.	.	.	283.80
Orford . . . . .	.	.	.	.	59.25
Ossipee . . . . .	.	.	.	.	15.00
Plaistow . . . . .	.	.	.	.	18.90
Raymond . . . . .	.	.	.	.	24.33
Rumney . . . . .	.	.	.	.	14.80
Salem . . . . .	.	.	.	.	87.75
Salisbury . . . . .	.	.	.	.	26.30
Sanbornton . . . . .	.	.	.	.	78.00
Sandwich . . . . .	.	.	.	.	72.90
Springfield . . . . .	.	.	.	.	29.00
Sullivan . . . . .	.	.	.	.	18.20
Thornton . . . . .	.	.	.	.	68.00
Tilton . . . . .	.	.	.	.	403.50
Troy . . . . .	.	.	.	.	24.00
Wakefield . . . . .	.	.	.	.	9.00
Wentworth . . . . .	.	.	.	.	17.50
Wilmot . . . . .	.	.	.	.	29.20

\$4,247.26

EQUALIZATION OF SCHOOL PRIVILEGES.

The equalization law of 1899 and the high school law of 1901 were notable efforts of the legislature to respond to the demand of the people that school privileges, and burdens as well, be equalized among the towns and cities of the state

The figures given in the preceding pages relative to expenditure and taxation show the necessity of carrying this principle further. Inasmuch as public education is demanded by the state for the state's welfare, it seems proper that the entire compulsory school tax should be raised by the state and divided in such manner as would help the poorer towns. Compulsory local taxation for the support of schools should be abolished, and a sum corresponding to the aggregate expenditure raised by the state, leaving to local sentiment and liberality taxation for all repairs, new buildings, and additional school money deemed necessary.

The New Hampshire State Teachers' Association at its forty-ninth annual session, held October 17 and 18, 1902, adopted the following resolution unanimously:

"Resolved, That the entire state is responsible for the education of all the children of the state; and that school money should be raised as a state tax, to the end that taxation should bear more equally upon all the towns and cities of the state."

Along the same line is the resolution of the State Grange at its annual session of 1900, viz.:

"Resolved, That the State Grange reaffirms its belief in the principle of equalization of school privileges and the equalization of taxation for school purposes, that public education is for the good of the state, and that the whole state should be responsible for it."

Since the last biennial report of this department two distributions of the state appropriation for equalizing school privileges have been made, viz.: in December, 1900, and December, 1901; another will be made in December of the current year.

I give herewith a list of towns receiving a share each year, with the items upon which the distribution is based:

DISTRIBUTION OF THE APPROPRIATION.

DECEMBER, 1900.

TOWNS.	Equalized valuation.	Average attendance.	Equalized valuation per pupil of average attendance.	Paid by state for support of schools under law of 1899.
Ellsworth.....	\$32,669	21	\$1,555	\$75.91
Seabrook.....	320,373	195	1,642	613.50
Chatham.....	82,065	48	1,708	164.37
Eaton.....	123,114	67	1,837	215.39
Dorchester.....	105,960	56	1,892	173.62
Jefferson.....	354,393	179	1,979	542.12
Orange.....	75,728	38	1,992	110.54
Madison.....	200,847	100	2,008	296.04
Thornton.....	195,914	97	2,019	255.59
Stewartstown.....	402,964	199	2,024	588.97
Groton.....	119,415	58	2,058	155.05
Gorham.....	611,376	293	2,086	842.85
Milan.....	344,764	164	2,102	466.70
Columbia.....	275,126	127	2,166	349.96
Albany.....	68,309	30	2,276	77.21
Bartlett.....	457,641	148	2,311	381.75
Danville.....	220,840	94	2,349	236.89
Stratford.....	499,264	211	2,366	533.47
Sullivan.....	174,474	73	2,390	179.39
Andover.....	639,223	262	2,439	600.68
Effingham.....	229,837	94	2,445	229.36
Springfield.....	162,674	66	2,464	156.55
Northumberland.....	706,229	322	2,472	780.56
Stark.....	297,177	120	2,476	288.20
Dalton.....	187,626	74	2,535	171.19
Clarksville.....	145,709	57	2,556	129.35
Conway.....	1,038,916	403	2,577	936.53
Whitefield.....	898,624	330	2,723	727.77
Carroll.....	360,219	132	2,728	287.78
Colebrook.....	977,008	358	2,729	784.50
Middleton.....	113,475	41	2,767	85.87
Brookfield.....	152,552	55	2,773	115.35
Grantham.....	155,912	55	2,834	114.92
Tamworth.....	459,135	161	2,851	334.80
Orford.....	424,464	147	2,887	301.08
Woodstock.....	226,428	76	2,979	148.84
Kingston.....	374,877	125	2,999	246.03
New Durham.....	242,086	80	3,026	154.43
Troy.....	590,069	194	3,041	380.29
Lempster.....	187,427	61	3,072	115.47
Dummer.....	139,267	45	3,094	84.64
Plaistow.....	366,900	117	3,135	220.56
Ossipee.....	639,443	203	3,149	384.36
Unity.....	247,280	78	3,170	143.32
Moultonborough.....	395,907	124	3,192	229.79
Pittsburg.....	403,303	126	3,200	233.00
Grafton.....	420,203	131	3,207	241.93
Bennington.....	315,552	97	3,253	174.95
Newton.....	374,558	115	3,257	208.95
Piermont.....	364,251	109	3,341	192.02
Salem.....	754,248	230	3,279	417.85
Jackson.....	295,671	88	3,359	152.97
Bethlehem.....	874,186	260	3,362	462.33
Sandown.....	181,580	54	3,362	94.46
Fitzwilliam.....	575,968	167	3,448	287.02
Alexandria.....	283,408	82	3,456	137.97
Holderness.....	283,688	83	3,478	138.80

DISTRIBUTION OF THE APPROPRIATION. — *Continued.*

TOWNS.	Equalized valuation.	Average attendance.	Equalized valuation per pupil of average attendance	Paid by state for support of schools under law of 1899.
DECEMBER, 1900.— <i>Continued</i>				
Cornish.....	\$533,216	153	\$3,485	\$260.51
Bridgewater.....	156,042	44	3,546	72.41
Lyman.....	195,370	55	3,552	90.93
Windsor.....	35,571	10	3,557	26.66
Campton.....	455,059	121	3,700	189.34
Raymond.....	583,464	153	3,813	236.56
Hebron.....	130,987	34	3,852	49.69
Sharon.....	73,393	19	3,862	28.46
Tuftonborough.....	286,197	74	3,867	111.10
Errol.....	148,254	36	4,118	48.01
Fremont.....	313,451	76	4,124	105.79
Randolph.....	74,564	18	4,142	24.49
Hampstead.....	512,400	120	4,270	164.57
Benton.....	124,063	29	4,278	38.25
Northfield.....	690,728	77	4,310	102.39
Shelburne.....	157,524	36	4,375	47.05
DECEMBER, 1901.				
Dorchester.....	\$105,060	64	\$1,641	\$236.33
Albany.....	68,309	41	1,666	149.13
Chatham.....	82,065	47	1,746	163.13
Seabrook.....	320,373	173	1,851	566.36
Gorham.....	611,376	314	1,947	977.29
Thornton.....	195,914	91	2,152	251.21
Orange.....	75,728	35	2,163	100.04
Jefferson.....	354,393	163	2,174	454.31
Eaton.....	123,114	56	2,198	154.40
Stratford.....	499,264	220	2,269	587.51
Danville.....	220,840	95	2,324	245.66
Dalton.....	187,626	80	2,345	206.70
Northumberland.....	796,229	331	2,405	823.97
Milan.....	344,764	141	2,445	349.41
Bartlett.....	457,641	183	2,500	443.58
Springfield.....	162,674	65	2,502	154.37
Sullivan.....	174,474	69	2,528	165.37
Madison.....	200,847	78	2,574	183.61
Andover.....	639,223	248	2,577	583.14
Grantham.....	155,912	60	2,598	139.91
Conway.....	1,038,916	399	2,603	928.86
Columbia.....	275,126	105	2,620	242.81
Stark.....	297,177	112	2,653	255.78
Middleton.....	113,475	42	2,701	94.22
Orford.....	424,464	154	2,756	338.56
Moultonborough.....	395,907	143	2,768	313.05
Ellingham.....	229,837	83	2,769	181.61
Brookfield.....	152,552	55	2,773	114.16
Groton.....	119,415	43	2,777	93.37
Plaistow.....	363,900	129	2,820	277.17
Colebrook.....	977,098	340	2,873	718.34
Ossipee.....	639,443	222	2,880	467.00
New Durham.....	242,086	84	2,881	176.64
Kingston.....	374,877	129	2,906	269.00
Clarksville.....	145,709	50	2,914	103.92
Whitefield.....	898,624	306	2,936	631.56
Alexandria.....	283,408	94	3,014	188.53
Carroll.....	360,219	118	3,052	236.33
Troy.....	590,063	193	3,057	379.56
Lempster.....	187,472	60	3,123	114.40
Bethlehem.....	874,186	276	3,167	528.12
Unity.....	247,028	77	3,211	143.31

DISTRIBUTION OF THE APPROPRIATION.—*Continued.*

TOWNS.	Equalized valuation.	Average attendance.	Equalized valuation per pupil of average attendance.	Paid by state for support of schools under law of 1899.
DECEMBER, 1901.— <i>Continued.</i>				
Gilmanton	\$666,478	205	\$3,251	\$382.07
Tamworth	459,135	141	3,256	262.39
Holderness	288,688	87	3,318	158.88
Danbury	364,417	109	3,343	197.55
Newton	374,558	111	3,374	199.30
Salem	754,248	223	3,382	399.59
Fitzwilliam	575,968	170	3,388	304.08
Lynan	195,370	57	3,427	100.77
Wentworth	298,393	86	3,469	150.22
Richmond	256,818	74	3,470	129.19
Deering	277,866	80	3,473	139.55
Sandown	184,580	53	3,482	92.22
Woodstock	226,428	65	3,483	113.07
Shelburne	157,524	45	3,500	77.92
Dummer	139,267	39	3,570	66.16
Grafton	420,203	115	3,653	190.76
Sharon	73,393	20	3,669	35.02
Bridgewater	156,042	42	3,715	68.47
Campton	455,050	118	3,856	185.43
Tuftonborough	286,197	74	3,867	110.92
Hebron	130,987	29	4,516	38.89
Errol	148,254	31	4,782	41.26
Benton	124,063	25	4,962	32.47
Windsor	35,571	7	5,080	18.29
*Northfield	690,728	68	10,157	57.53
Jackson	295,671	82	3,605	137.79
Cornish	533,216	137	3,892	213.31
Raymond	583,464	149	3,915	230.58
Piermont	364,251	92	3,959	140.77
Bennington	315,552	79	3,994	119.83
Pittsburg	403,303	98	4,115	144.29
Randolph	74,564	14	5,326	18.88
Stewartstown	402,964	175	2,302	460.68
DECEMBER, 1902.				
Chatham	\$82,065	48	\$1,709	\$156.51
Eaton	123,114	70	1,758	221.18
Ellsworth	32,669	18	1,815	56.06
Jefferson	354,393	194	1,826	590.27
Seabrook	320,373	174	1,841	525.10
Dorchester	105,060	57	1,843	171.79
Stewartstown	402,964	119	1,956	337.97
Albany	68,309	34	2,009	95.01
Orange	75,728	36	2,103	95.06
Orford	424,464	201	2,111	528.99
Stratford	499,264	232	2,152	598.94
Dalton	187,626	85	2,207	213.96
Milan	344,764	156	2,210	392.14
Gorham	611,376	264	2,315	635.55
Andover	639,223	272	2,350	643.05
Middleton	113,475	48	2,364	112.79
Springfield	162,674	67	2,428	153.29
Grantham	155,912	64	2,436	145.96
Conway	1,038,916	425	2,444	966.13
Efingham	229,837	94	2,445	213.57
Thornton	195,914	78	2,511	172.57
Columbia	275,126	109	2,524	239.91

* Entire town of Northfield.

DISTRIBUTION OF THE APPROPRIATION.—*Continued.*

TOWNS.	Equalized valuation.	Average attendance.	Equalized valuation per pupil of average attendance.	Paid by state for support of schools under law of 1899.
DECEMBER, 1902.— <i>Continued.</i>				
Bartlett.....	\$457,641	181	\$2,528	\$397.53
Madison.....	200,847	78	2,574	168.35
Clarksville.....	145,709	56	2,601	119.62
Danville.....	220,840	83	2,660	173.35
Northumberland.....	769,229	297	2,680	615.72
Stark.....	297,177	110	2,701	226.26
Unity.....	247,280	90	2,747	182.01
Sullivan.....	174,474	63	2,769	126.40
Whitefield.....	898,624	324	2,773	649.16
Dummer.....	139,267	55	2,785	99.73
Moultonborough.....	395,907	140	2,827	275.13
Troy.....	590,069	208	2,836	407.48
Plaistow.....	363,900	128	2,842	250.19
Danbury.....	364,417	126	2,892	242.02
Brookfield.....	152,552	52	2,933	98.45
Alexandria.....	283,408	96	2,952	180.68
Groton.....	119,415	40	2,985	74.81
Colebrook.....	977,098	326	2,997	622.88
Kingston.....	374,877	125	2,999	231.57
Holderness.....	288,688	95	3,038	173.74
Woodstock.....	226,428	74	3,059	134.39
Lempster.....	187,427	61	3,072	110.29
Tamworth.....	459,135	148	3,102	265.08
New Durham.....	242,086	78	3,103	139.62
Bethlehem.....	874,186	281	3,110	501.98
Richmond.....	256,818	82	3,131	145.51
Newton.....	374,558	110	3,228	199.63
Newmarket.....	1,526,339	461	3,310	773.78
Gilmanton.....	666,478	199	3,349	330.14
Antrim.....	852,983	251	3,398	410.37
Ossipee.....	639,443	187	3,419	303.86
Piermont.....	364,251	106	3,436	171.35
Grafton.....	420,203	122	3,444	196.79
Fitzwilliam.....	575,968	166	3,469	248.19
Lyme.....	579,502	167	3,470	267.35
Salem.....	754,248	215	3,508	340.47
Bridgewater.....	156,042	44	3,546	70.89
Windsor.....	35,571	10	3,557	18.11
Wentworth.....	298,393	83	3,595	128.23
Raymond.....	583,464	160	3,646	243.80
Pittsburg.....	403,303	105	3,840	151.90
New Hampton.....	435,731	112	3,890	159.96
Bennington.....	315,552	78	4,045	107.12
Sharon.....	73,393	18	4,077	25.50
Campton.....	455,059	110	4,136	147.73
Carroll.....	360,219	87	4,140	116.73
Randolph.....	74,564	18	4,142	25.11
Sandwich.....	525,566	126	4,171	167.79
Barrington.....	656,266	151	4,346	193.02
*Northfield.....	331,549	68	4,875	77.45

*Town School District.

SUPERVISION.

District supervision under the law of 1899 is gaining slowly but surely. People are coming more and more to understand that school work under modern conditions is a specialty, and that its supervision calls for specialists.

The conservatism of our rural population is a guaranty of a safe moderation in the adoption of a new method of management, but I am confident that the district system will appeal to their good judgment increasingly as they understand it better. New towns vote for supervision every year; only one town has reversed its action after joining a district.

The superintendents in the state are as follows:

CITY.	SUPERINTENDENT.	SALARY.
Concord	Louis J. Rundlett.....	\$2,500
Dover.....	Frank H. Pease.....	1,500
Keene	Thaddeus W. Harris.....	1,200
Laconia	Joseph H. Blaisdell.....	1,250
Manchester.....	Charles W. Bickford.....	2,300
Nashua.....	James H. Fassett.....	1,800
Portsmouth	Henry C. Morrison.....	1,800
Rochester.....	Ernest L. Silver.....	1,200
TOWN.		
Claremont.....	Charles Tracy.....	\$1,200
DISTRICT.		
Marlborough, Troy, Fitzwilliam, Dublin.....	Henry B. Stearns.....	\$1,000
Durham, Alton, Newmarket, Strat- ham.....	George H. Whitcher	1,700
Salem, Hampstead, Epping, Hud- son.....	Edgar E. Hulse.....	1,300
Pittsfield, Pembroke.....	Frank H. Benedict.....	1,000
Franklin, Penacook.....	Henry C. Sanborn.....	1,200
Walpole, Westmoreland, Alstead..	Clinton J. Richards.....	1,000

The Franklin-Penacook district is organized under the law of 1895; the other districts under the law of 1899.

There are now several towns that have passed the authorizing vote whose boards have not been able to form a union.

TEACHERS' INSTITUTES.

The law prescribes that the Superintendent of Public Instruction shall hold at least one institute in every county during the year. There is, however, no statutory definition of an institute, and limitation as to its length. Experience has proved that in the larger counties more than one of these schools for teachers must be held if any considerable percentage of the teachers are to be influenced. In the year 1901, sixteen one-day institutes were held, and in 1902, fifteen were held previous to June 1, besides a high school institute of two days' and a summer institute of two weeks' duration in each year. The institute fund available in each year is, in round numbers, \$2,300, out of which is paid the expense of the examination of candidates for state teachers' certificates. A detailed statement of expense, names of instructors, and topics presented, appears in another part of this report.

Teachers' institutes in New Hampshire have had a checkered history. They were first authorized in 1846 by a legislative enactment that "Any town may raise in addition to the amount required by law for the support of common schools, a sum not exceeding five per cent. of such amount for the support of a teachers' institute in the county." In 1851, the amount was definitely stated as three per cent., and it was provided that said sum "shall be raised and appropriated." In 1857, the proportion was reduced to two per cent., and in 1861 all requirements for the support of institutes were repealed. Institutes were re-established in 1868, with the provision that one should be held in each county annually. An annual appropriation of \$3,000 was made by the state for their maintenance. The legislature of 1874 repealed this law. In 1883, institutes were re-established, and a permanent fund set apart for their support. In 1885 the present

law was enacted, that "teachers of public schools may attend teachers' institutes held within the state, as provided by law, not exceeding three days in any term or five days in any year, and the time so spent shall be regarded as spent in the service of the district; and school boards shall allow teachers to close their schools for that purpose."

If this law means anything it gives to teachers the right to close their schools for the purpose of attending institutes without deduction of pay. Neither the letter nor the spirit of this law gives the school board authority to forbid attendance. The decision is absolutely within the discretion of the teacher. Moreover, it is a short-sighted policy on the part of school boards to discourage teachers in their ambition for self-improvement. If teachers are not honest in their use of the time, there should be no place for them in any school system.

SCHOOL REGISTERS.

Too little attention is paid by school boards to the supervision of the school registers. It is the custom with many school boards to utterly neglect the register till the close of the school year, and then to blame the teacher for inaccuracies, wrong methods, and faulty results. It is not to be expected that young and inexperienced teachers should know by intuition the importance of accuracy, and understand the proper method of keeping this record. It is to be expected that every member of a school board should know that the registers form the basis of all school statistics, and that absolute accuracy and uniformity are essential.

The registers should be deposited in the archives of the town for reference. To the future writer of town or local history they will be invaluable. No register should be thrown away, none mislaid, but all carefully preserved. The knowledge that this disposition of the registers was to be made would of itself be an incentive to care and accuracy. More names and fewer nicknames would be recorded. "Jimmie," and "Jackie," and "Mamie" would appear under the proper title.

PHYSIOLOGY AND HYGIENE.

The statute calls upon the superintendent of public instruction to recommend to school boards "what he considers the best text-books upon these subjects."

From the nature of the case, no one best text-book can be selected in any subject. The age, characteristics, and environment of the pupils, the ability and efficiency of the teacher, the desires of the school board, are all influences to be consulted in determining the best text-book for any school.

I understand the spirit of this law to require the superintendent to examine the books before the public and to recommend such as seem to fill the law's demand. In conformity to this understanding, I present the following list of text-books which may be used in the schools in compliance with section 6 of chapter 92 of the Public Statutes :

"SECT. 6. [*As amended by chapter 40 and chapter 50, Session Laws of 1895.*] They [the school board] shall prescribe in all mixed schools and in all graded schools above primary, the studies of physiology and hygiene, having special reference to the effects of alcoholic stimulants and of narcotics upon the human system, and shall see that the studies so prescribed are thoroughly taught in said schools and that well approved text-books upon these subjects are furnished to teachers and scholars, and may permit or prescribe the study of algebra, geometry, surveying, bookkeeping, philosophy, chemistry, and natural history, or any of them, and other suitable studies."

PHYSIOLOGIES — PRIMARY.

A Primer of Health, Chas. H. Stowell, M. D. Silver, Burdett & Co.

Primary Lessons in Human Physiology and Hygiene, Winfred E. Baldwin, M. D. Werner School Book Co.

Oral Lesson Book in Hygiene, Henrietta Amelia Mirick. American Book Co.

The Child's Book of Health, Albert F. Blaisdell, M. D. Ginn & Co.

The New Century Primer of Hygiene, Jeannette Winter Hall. American Book Co.

Our Wonderful Bodies, Joseph C. Hutchison, M. D. Maynard, Merrill & Co.

Physiology and Health, No. 1. E. H. Butler & Co.

Good Health for Children, Orestes M. Brands. Leach, Shewell and Sanborn.

Primer of Physiology and Hygiene, William Thayer Smith, M. D. American Book Co.

Health for Little Folks, Union Series No. 1. American Book Co.

Childs Health Primer, Pathfinder No. 1, W. C. T. U. American Book Co.

PHYSIOLOGIES — GRAMMAR.

Essential Lessons in Human Physiology and Hygiene, Winfred E. Baldwin, M. D. Werner School Book Co.

Our Bodies and How We Live, Albert F. Blaisdell, M. D. Ginn & Co.

Elementary Anatomy, Physiology, and Hygiene, Winfield S. Hall, M. D. American Book Co.

Intermediate Physiology and Hygiene, Winfield S. Hall, M. D. American Book Co.

Elementary Physiology and Hygiene, Buel P. Colton. D. C. Heath & Co.

A Healthy Body, Chas. H. Stowell, M. D. Silver, Burdett & Co.

How to Keep Well, Albert F. Blaisdell, M. D. Ginn & Co.

Elementary Physiology, Foster & Shore. The Macmillan Co.

First Book in Physiology and Hygiene, J. H. Kellogg, M. D. American Book Co.

Lessons in Hygiene, Jhonnot & Bouton. American Book Co.

Physiology and Health, Union Series No. 2. E. H. Butler & Co.

The Essentials of Health, Chas. H. Stowell, M. D. Silver, Burdett & Co.

Human Anatomy, Physiology, and Hygiene, Chas. H. May, M. D. Wm. Wood & Co.

The Human Body and its Health, Wm. Thayer Smith, M. D. American Book Co.

Our Wonderful Bodies, No. 2, Joseph C. Hutchison, M. D. Maynard, Merrill & Co.

The Human Body, H. Newell Martin, M. D. Henry Holt & Co.

Hygienic Physiology, Joel Dorman Steele, M. D. American Book Co.

Elementary Physiology, Richard J. Dunglison. Werner School Book Co.

Hygiene for Young People, Pathfinder No. 2. American Book Co.

PHYSIOLOGIES — REFERENCE AND ADVANCED.

Anatomy, Physiology, and Hygiene, Jerome Walker, M. D. Allyn & Bacon.

Outlines of Anatomy, Physiology, and Hygiene, Roger C. Tracy, M. D. American Book Co.

Second Book in Physiology and Hygiene, J. H. Kellogg, M. D. American Book Co.

The Human Body, H. Newell Martin. Henry Holt & Co.

Academic Physiology and Hygiene, Orestes M. Brands. Leach, Shewell & Sanborn.

School Physiology and Hygiene, Richard J. Dunglison, M. D. Werner School Book Co.

Physiology and Hygiene, Joseph C. Hutchison, M. D. Maynard, Merrill & Co.

High School Physiology and Hygiene, Henry F. Hewes, M. D. American Book Co.

Practical Physiology, Albert F. Blaisdell, M. D. Ginn & Co.

Life and Health, Albert F. Blaisdell, M. D. Ginn & Co.

Advanced Lessons in Human Physiology and Hygiene, Winfred E. Baldwin, M. D. Werner School Book Co.

Physiology, Briefer Course, Buel P. Colton. D. C. Heath & Co.

Respectfully submitted,

CHANNING FOLSOM,

Superintendent of Public Instruction.

APPENDIX.

APPENDIX.

DECISION OF THE SUPREME COURT GIVEN AT DECEMBER
TERM, 1902, IN CASE OF STATE *v.* JACKSON.

No. 164, Carroll.

State v. Samuel H. Jackson.

Appeal from a justice of the peace on complaint under chapter 93, Public Statutes, as amended by section 1, chapter 61, of the Session Laws of 1901.

The respondent moved to quash the complaint on the ground that the statute was unconstitutional. The motion was denied, and the respondent excepted.

The state proved that the respondent had the custody and control of his minor daughter, Alice Jackson, of the age of ten years; that they resided in the school district of Tamworth, in said county, in which a public school is annually taught; Alice has never been instructed in any private school approved by the school board, and has not acquired the common English branches or other more advanced studies. She has not attended the public school all the time such school was in session and has not been excused by the school board of the district from attendance. No formal application was ever made for such excuse; no evidence as to the condition of the child, other than the statement of the respondent made to the school board, was offered to the school board until the day of trial.

The respondent offered evidence to show that Alice was in feeble health; that he took her from school, acting and believing in good faith that her attendance at and confinement

in the school would seriously injure her reason and health; that he so informed two members of the school board before her removal from the school, and offered evidence of a physician that her confinement in the school would greatly endanger her life, all of which evidence was excluded and the respondent excepted.

No other evidence was introduced in defence.

Verdict of guilty, which the respondent moved to set aside for error in denying his motion to quash, and in excluding the foregoing evidence.

Transferred by STONE, J., from the March term, 1902, of the superior court.

E. G. Eastman, attorney-general, and Sewall W. Abbott, for the state. Arthur L. Foote, for the respondent.

REMICK, J. The motion to quash the complaint on the ground that the statute upon which it was founded is unconstitutional, was properly denied. The statute is as follows: "Every person having the custody and control of a child between the ages of eight and fourteen years, residing in a school district in which a public school is annually taught, shall cause such child to attend the public school all the time such school is in session, unless the child shall be excused by the school board of the district because his physical or mental condition is such as to prevent his attendance for the period required, or because he was instructed in the English language in a private school approved by the school board for a number of weeks equal to that in which the public school was in session, in the common English branches, or having acquired those branches in other more advanced studies. Any person who does not comply with the requirements of this section shall be fined ten dollars for the first offence and twenty dollars for every subsequent offence." P. S., c. 93, s. 14. Laws of 1901, c. 61, s. 1.

That education of the citizen is essential to the stability of the state is a proposition too plain for discussion. As a mere generalization of our own it would command immediate and

universal assent. But it rests upon a firmer foundation. The constitution declares that "knowledge and learning, generally diffused through a community, are essential to the preservation of a free government." Const. N. H., art. 82. Nor does it stop with this abstract statement. It provides that "it shall be the duty of legislators and magistrates in all future periods of this government to cherish the interests of literature and the sciences, and all seminaries and public schools." Const. N. H., art. 82.

Showing that something more than a mere sentimental interest was intended by the injunction "to cherish the interests of literature, etc.," this court has said: "The clause in the constitution * * * in regard to the encouragement of literature, in connection with the early legislation on the subject, * * * shows conclusively if any such evidence were needed, that the framers of the constitution, as well as their contemporaries in the legislature, regarded the subject of education as one of public concern, to be cherished, regulated and controlled by the state; and the great multitude and variety of acts since passed show that no different view has ever been entertained." The constitution "enjoins the duty in very general and comprehensive terms, on magistrates and legislators, as one of paramount public importance." LADD, J., *Farnum's Petition*, 51 N. H. 376, 378, 379. It thus being the constitutional duty of the legislature to diffuse knowledge and learning through the community, it must be within the constitutional power of the legislature to enforce school attendance to that end. But the right is not left to implication. "Full power and authority are given and granted to the general court, from time to time, to make, ordain and establish' all manner of wholesome and reasonable orders, laws, statutes, ordinances, directions and instructions, either with penalties or without, so as the same be not repugnant or contrary to the constitution, as they may judge for the benefit and welfare of this state, and for the governing and ordering thereof." Const. N. H., art 5.

Whether the statute in question is "wholesome and reasonable," within the meaning of the provision of the constitution last referred to, is a question over which the court has no control. "The ample authority conferred upon the legislature to make, ordain, and establish all manner of wholesome and reasonable orders, laws and statutes, which it shall judge to be for the good of the commonwealth, necessarily invests that department of the government with the right of determining conclusively upon the propriety and reasonableness of all provisions which are not in some way repugnant to the constitution." *Com. v. Williams*, 6 Gray 1, 3; *Orr v. Quimby*, 54 N. H. 590, 608. "The judiciary can only arrest the execution of a statute when it conflicts with the constitution. It cannot run a race of opinions upon points of right, reason and expediency with the law-making power." *Cooley Const. Lim.* 201. "We have not to inquire into the policy of the law, or if the purpose is admitted to be public, whether the supposed public good to be obtained was sufficient to justify the legislature. * * * All mere questions of expediency, and all questions of the just operation of the law, within the limits prescribed by the constitution, were settled by the legislature when it was enacted. The court have only to place the statute and the constitution side by side and say whether there is such a conflict between the two that they cannot stand together." LADD, J., *Perry v. Keene*, 56 N. H. 514, 530.

Being without brief or argument from the defendant, we are not advised upon what ground he asserts the unconstitutionality of the act. Certainly, it is not unconstitutional, merely because, in obedience to the mandate of the constitution, and for "the preservation of a free government," it interferes in some measure with the natural right of parental dominion. "When men enter into a state of society they surrender up some of their natural rights to that society, in order to secure the protection of others" (N. H. Bill of Rights, art. 3), and subject themselves to innumerable restrictions and regulations for the common good. *State v.*

Express Co., 60 N. H. 219, 253, 254. But the surrender is not absolute. There are "certain natural, essential and inherent rights" reserved by the constitution, and of which the citizen cannot be deprived by legislative enactment. "Rights paramount to all governmental authority," and which no legislation can invalidate or abridge (*Wooster v. Plymouth*, 62 N. H. 193, 200; *State v. Jackman*, 69 N. H. 318); rights "higher and earlier in origin than the constitution or the common law, not superseded by those temporal and finite systems, but sustained and enforced by the declaration and sanction of the highest, primary, eternal and infinite law of nature." *Aldrich v. Wright*, 53 N. H. 398, 400. Thus, "As a fundamental and essential right, 'the defense of life, liberty and property,' is * * * put, by a special guaranty, above the altering and repealing power of the legislature." *Aldrich v. Wright*, 53 N. H. 391, 399. And so it was held, that one might lawfully kill a mink in defense of his geese, notwithstanding the existence of a statute providing that "no person shall in any way destroy * * * a mink * * * under penalty of \$10 for each animal so destroyed"; that the owner's "natural, common law and constitutional right of defense existed in full force and vigor, not repealed, nor in the slightest degree impaired or modified, by the statute"; that "he could exercise that right as fully and freely as if the statute had not been enacted." *Aldrich v. Wright*, 53 N. H. 398, 399, 400. For the preservation and propagation of fur-bearing animals, in the interest of society at large the legislature had the undoubted right to prohibit their destruction, within a certain season, for purposes of sport, profit or the like, but they could not repeal the constitutional right of defense. *Aldrich v. Wright*, 53 N. H. 398, 399, 400. If statutory prohibitions and penalties are thus impotent to take away the inherent right of defense, when invoked in behalf of one's geese, surely they must be so, when the right is resorted to in defense of one's own life or that of his child. For the diffusion of knowledge and learning through the community, the legislature have the undoubted right, as

against the mere will and pleasure of the parent, to require him to send his child to school, but they cannot repeal the natural common law and constitutional right of the parent "to do whatever, apparently, is reasonably necessary to be done in defense" of the life of his child. If it was apparently reasonably necessary, in defense of his geese, that the owner should then and there destroy the mink, the legislature could not constitutionally require him to first get permission of the game warden. So if apparently reasonably necessary for a parent to keep or withdraw his child from school, in defense of the child's life, without first applying for excuse by the school board, the legislature cannot compel him to first make such application. Of course, in case of complaint against a parent for withdrawing or detaining his child from school without excuse from the school board, the burden would be upon the accused to show that what he did was apparently reasonably necessary in defense of the child's life. Failing, he would be amenable to the statute. Succeeding, he would be exempt from its operation. But upon this question of reasonable necessity he would be entitled to the judgment of his peers. A parent cannot be required to imperil the life of his child by delays incident to an application to the school board, before he can lawfully do what is apparently reasonably necessary for its protection.

The letter of the statute in question prohibits the parent from keeping or withdrawing his child from school, without consent of the school board, even when, apparently reasonably necessary to do so in order to preserve the child's life. To this extent the statute, taken literally, contravenes the constitutional right of defense to which we have referred. "But as the legislature could not abolish the right, they are not presumed to have attempted an impossibility, or to have intended to pass a void act. And the statute is held valid by giving it a construction compatible with the constitution, making it applicable only to those cases to which it can be constitutionally applied." *Aldrich v. Wright*, 53 N. H. 398, 399. To illustrate: One, whose child is stricken by

some malady, making detention from school reasonably necessary in defense of the child's life, breaks no law of this jurisdiction by hastening for doctors and nurses instead of to the board of education. On the other hand, if he keeps his child from school merely to suit his own or his child's pleasure or for any other reason not within the exceptions provided by the act, or guaranteed by the constitution, he must suffer the penalty. Indeed, as thus limited, the law is a decided invasion of the parental domain, but being repugnant to no provision of the constitution, and being for "the benefit and welfare of this state and for the governing and ordering thereof," the citizen, in fulfilment of the social compact, must yield submission and obedience. *School Board v. Jackson*, 7 Q. B. D. 502; *Burdick v. Babcock et al.*, 31 Iowa 562, 568, 569, 570, 571; *Donahoe v. Richards*, 38 Me. 379, 391, 395, 396, 397; *Schoulers Dom. Rel.* 235.

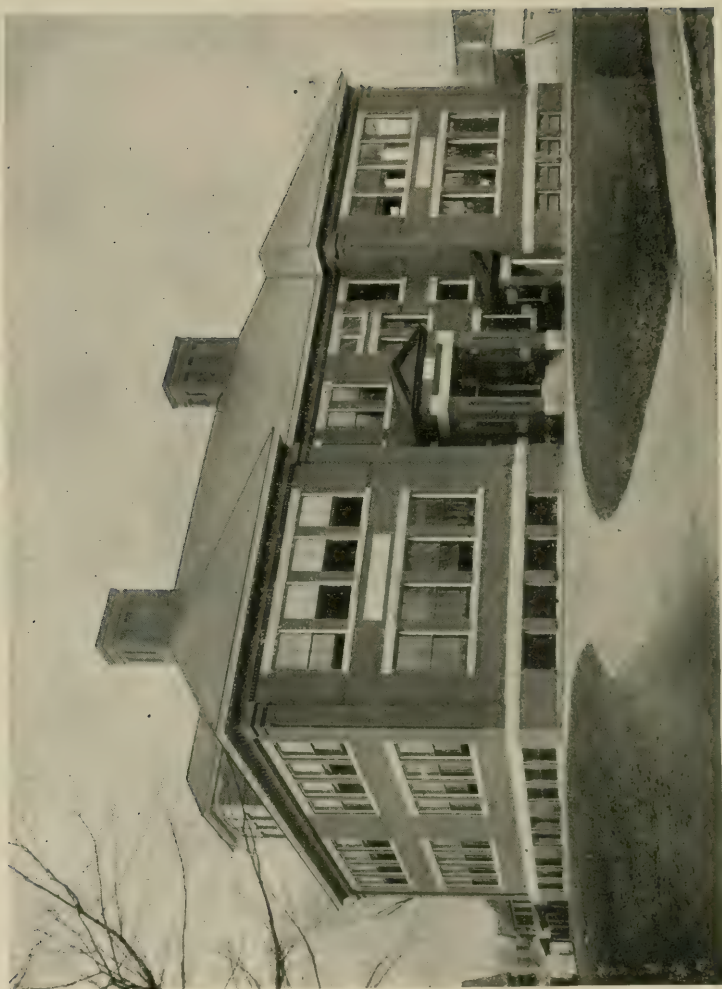
The statute requires attendance "all the time school is in session," and as would appear makes no provision for excuse excepting on account of the physical and mental condition of the child. Literally construed, the parent incurs its penalty who keeps his child from school a single day, for any other cause, however imperative, even though it be to attend the mother's funeral. It is inconceivable that the legislature intended the act to have such sweeping effect.

Chapter 93, section 14, Public Statutes, required the parent to cause his child, if between the age of eight and sixteen years, to attend school twelve weeks in each year, six of which should be consecutive. Under this statute we are not aware that it was suggested that mere occasional and temporary absences could not be permitted by the school board for other causes than the physical or mental condition of the child. The statute in question amended that statute by substituting the entire school year for twelve weeks, as the compulsory attendance period, and made it apply to children between eight and fourteen instead of between eight and sixteen years of age. In this view it is reasonable to suppose that the words "all the time such school is in session," in

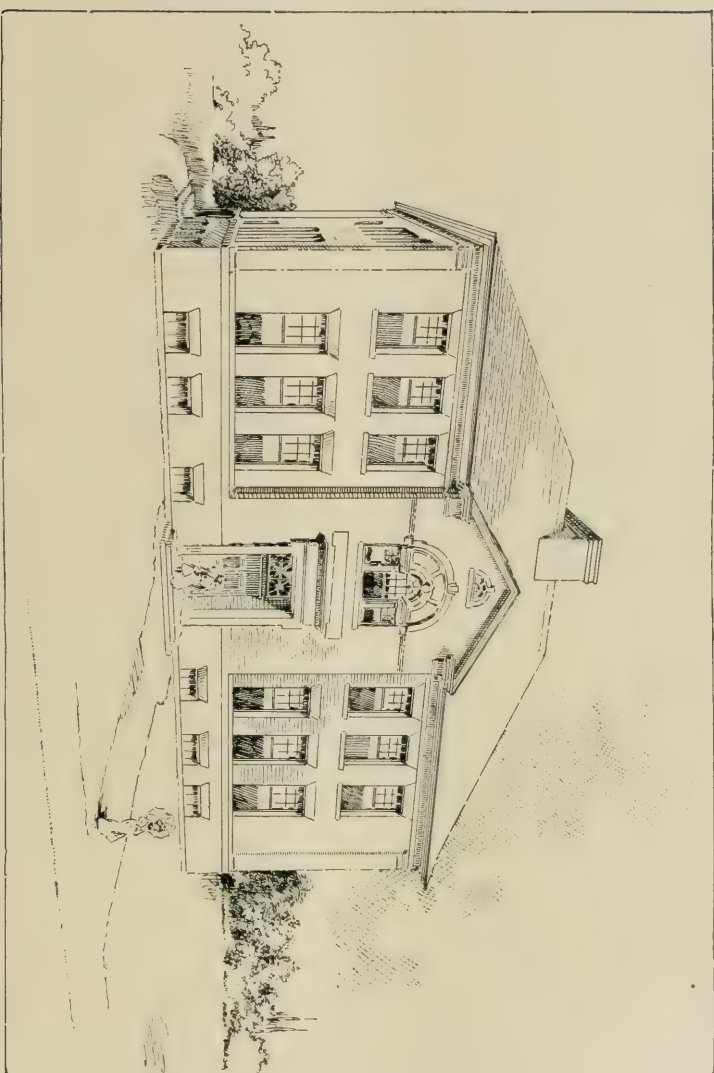
the present statute, like the words "twelve weeks," in the statute which preceded it, were used for the purpose of establishing a compulsory attendance period, in a general sense, and had no reference to occasional and temporary absence, not inconsistent with the general design already indicated; but left such absence subject to any reasonable regulations the governing board might see fit to establish. P. S., c. 93, s. 6. See Laws 1901, c. 16, s. 7.

(2) "The respondent offered evidence to show that Alice was in feeble health; that he took her from school, acting, and believing in good faith, that her attendance at and confinement in school would seriously injure her reason and health; that he so informed two members of the school board before he removed her from school, and offered evidence of a physician that her confinement in the school would greatly endanger her life, all of which evidence was excluded and the defendant excepted." This evidence tended to show that the action of the respondent in withdrawing Alice from school was apparently reasonably necessary in defense of her life. It also tended to show an attempt by the respondent to comply with the law. The law is not adapted nor intended for formal action. Upon the evidence as stated, in the absence of objection or request for further action by the school officers, the defendant may have been justified in understanding that the school board did not object, and the jury may find that the child was in fact excused. It may also be found upon the evidence that the child was so unfit for school that the only reasonable result of any investigation by the school board must have been her excuse from attendance. The statute was intended to secure the attendance of children who were able, not to confer arbitrary power upon the school board. To require a parent whose child was confined in bed during the year to apply for and secure an excuse, would be an idle formality. Such was not the purpose or intent of the law. The evidence was competent and its exclusion was error.

Exception sustained.



RUMFORD SCHOOL, CONCORD.



SCHOOLHOUSE AT CLAREMONT.



ROCHESTER HIGH SCHOOL.



SCHOOLHOUSE AT SUNAPEE.

SCHOOLHOUSE BUILT AT SUNAPEE IN 1901.

The building is of wood with ashler underpinning cut from the best of Sunapee granite. It has a ten-foot cellar under the whole structure; contains four recitation rooms, two teachers' rooms, and two corridors, and has sittings for one hundred sixty pupils. Its dimensions are 44 by 52 feet.

The building is supplied with running water from the Sunapee water-works; it is heated with hot air furnaces, and is equipped with sanitariums in the basement.

The total cost of this structure was \$6,500. The architect was E. R. B. Chapman, of Boston, Mass., the building committee consisting of E. R. Boyce, G. H. Gould, Mrs. E. M. Smith, A. D. Felch, and George Barnes.

REPORT OF REGENT
OF
STATE MEDICAL EXAMINERS.

REPORT OF THE REGENT OF THE STATE BOARDS OF MEDICAL EXAMINERS.

THE LAW.

AN ACT to regulate the licensing and registration of physicians and surgeons.

Be it enacted by the senate and house of representatives in general court convened:

SECTION 1. No person shall hold himself out to the public as a physician and surgeon, or advertise as such, or use the title of M. D. or Dr. (or any title which shall show or tend to show that the person using the same is a practitioner of any of the branches of medicine) in New Hampshire after September 1, 1897, unless previously registered and authorized, or unless licensed and registered as required by this chapter; nor shall any person practice medicine and surgery whose authority to practice is suspended or revoked by the agent of a state board.

SECT. 2. Within sixty days after the passage of this act, the governor and council shall appoint three separate state boards of medical examiners, of five members each, so appointed that the term of office of one member shall expire each year, and the members thereafter appointed shall hold office five years, or until their successors are appointed and qualified. One board shall represent the New Hampshire Medical Society, one the New Hampshire Homeopathic Medical Society, and one the New Hampshire Eclectic Society. Each of these three societies shall nominate, annually, twice the number of examiners to be appointed in

that year on the board representing it. The names of such nominees shall be annually transmitted, under seal, by the president and secretary, to the governor and council, who shall appoint from such lists the examiners required to form the boards and to fill any vacancy that may occur from expiration of office or otherwise. Each nominee, before appointment, shall furnish to the governor and council satisfactory proof that he has received the degree of doctor of medicine from some registered medical school, and that he has legally practiced medicine in this state for at least five years. If no nominees are presented from a society to the governor and council, they may appoint from members in good standing in such society without restriction. The governor and council, upon recommendation of the board, may remove any examiner for misconduct, incapacity, or neglect of duty.

SECT. 3. Every medical examiner shall receive a commission of appointment from the state, and before beginning his term of office shall file with the secretary of state the constitutional oath of office. Each board, or any member thereof, may take testimony and proofs concerning all matters within its jurisdiction. Each board may make any by-laws and rules, not inconsistent with law, necessary in performing its duties.

SECT. 4. The superintendent of public instruction, *ex officio*, shall be the regent of the state boards of medical examiners, and shall perform such duties as are herein specified.

SECT. 5. From the fees provided by this act, the regent may pay all proper expenses incurred by its provisions, except compensation to medical examiners; and any surplus at the end of any year shall be apportioned equally among the three boards; and the state shall not pay the expenses of said boards, or either of them, or compensate them, or either of them, for services rendered under their commissions.

SECT. 6. Each board shall annually elect from its members a president and a secretary for the year, and shall hold one or more meetings each year, pursuant to call of the

regent, who may also call joint meetings of the three boards or of their officers. At any meeting a majority shall constitute a quorum, but questions prepared by the boards may be grouped and edited, or answer papers of candidates may be examined and marked, by committees duly authorized by the boards.

SECT. 7. The regent shall admit to examination any candidate who pays a fee of \$10 and submits satisfactory evidence, verified by oath, if required, that he,—

1. Is more than twenty-one years of age.
2. Is of good moral character.
3. Has graduated from a registered college; or satisfactorily completed a full course in a registered academy or high school; or had a preliminary education considered and accepted by the regent as fully equivalent.
4. Has studied medicine not less than four full school years, of at least nine months each, including four satisfactory courses, of at least six months each, in four different calendar years, in a medical college registered as maintaining at the time a satisfactory standard. The regent shall accept, as the equivalent for any part of the third and fourth requirements, evidence of five or more years' reputable practice, provided that such substitution be specified in the license.
5. Has either received the degree of bachelor or doctor of medicine from some registered medical school, or a diploma or license conferring full right to practice medicine in some foreign country.

Students who matriculate in a New Hampshire medical school before January 1, 1898, on the prescribed study of medicine, shall be exempt from this preliminary education requirement.

SECT. 8. Each board shall submit to the regent, as required, lists of suitable questions for thorough examinations in anatomy, physiology and hygiene, chemistry, surgery, obstetrics, pathology and diagnosis, and therapeutics, including practice and materia medica. From these lists the regent

shall prepare question papers for all these subjects, which at any examination shall be the same for all candidates, except that in therapeutics, practice, and materia medica all the questions submitted to any candidate shall be chosen from those prepared by the board selected by that candidate and shall be in harmony with the tenets of that school, as determined by its state board of medical examiners.

SECT. 9. Examinations for license shall be given at Concord, in this state, and at least twice annually, and shall be exclusively in writing and in English. Each examination shall be conducted by the regent, or a competent examiner appointed by him, who shall not be one of the medical examiners. At the close of each examination the regent or examiner in charge shall deliver the questions and answer papers to the board selected by each candidate, or to its duly authorized committee, and such board, without unnecessary delay, shall examine and mark the answers and transmit to the regent an official report, signed by its president and secretary, stating the standing of each candidate in each branch, his general average, and whether the board recommends that a license be granted. Such report shall include the questions and answers and shall be filed in the public records of the regent. If a candidate fails on first examination, he may, after not less than six months' further study, have a second examination without fee. If the failure is from illness, or other cause satisfactory to the boards, they may waive the required six months' study.

SECT. 10. On receiving from a state board an official report that an applicant has successfully passed the examinations and is recommended for license, the regent shall issue to him a license to practice medicine. Every license shall be issued by the regent under seal, and shall be signed by each acting medical examiner of the board selected, and by the regent, and shall state that the licensee has given satisfactory evidence of fitness as to age, character, preliminary and medical education, and all other matters required by law, and that after full examination he has been found properly

qualified to practice. Applicants examined and licensed by other state examining boards registered by the regent as maintaining standards not lower than those provided by this chapter, and applicants who matriculate in a New Hampshire medical school before January 1, 1898, and who receive the degree M. D. January 1, 1903, may, without further examination, on payment of five dollars to the regent and on submitting such evidence as may be required, receive an indorsement of their licenses or diplomas conferring all rights and privileges of a regent license issued after examination.

Before any license is issued it shall be numbered and recorded in a book kept in the regent's office, and its number shall be noted in the license. This record shall be open to public inspection, and in all legal proceedings shall have the same weight as evidence that is given to a record of conveyance of land.

SECT. 11. This chapter shall not be construed to affect commissioned medical officers serving in the United States army, navy, or marine hospital service, while so commissioned; or any one while actually serving on the resident medical staff of any legally incorporated hospital; or any legally registered dentist exclusively engaged in practicing dentistry; or any manufacturer of artificial eyes, limbs, or orthopedic instruments or trusses in fitting such instruments on persons in need thereof; or any lawfully qualified physician in other states or countries meeting legally registered physicians in this state in consultation; or any physician residing on a border of a neighboring state and duly authorized under the laws thereof to practice medicine therein, whose practice extends into this state, and who does not open an office or appoint a place to meet patients or receive calls within this state; or to the regular or family physicians of persons not residents of this state, when called to attend them during a temporary stay in the state, or to the hotel physician regularly employed by the landlord of the summer hotel in the care of his guests or employees; neither

shall the provisions of this act apply to clairvoyants, or to persons practicing hypnotism, magnetic healing, mind cure, massage, Christian science, so called, or any other method of healing if no drugs are employed or surgical operations are performed; *provided*, such persons do not violate any of the provisions of this act in relation to the use of M. D. or the title of doctor or physician.

SECT. 12. Any person who, not being then lawfully authorized to practice medicine within this state and so registered according to law, shall hold himself out to the public as a physician and surgeon, or advertise as such, within this state, without lawful registration or in violation of any provision of this chapter; and any person who shall buy, sell, or fraudulently obtain any medical diploma, license, record, or registration, or who shall aid or abet such buying, selling, or fraudulently obtaining, or who shall practice medicine under cover of any medical diploma, license, record, or registration illegally obtained, or signed, or issued unlawfully, or under fraudulent representations or mistake of fact in a material regard; and any person who shall append the letters M. D. to his or her name; or shall assume or advertise the title of doctor (or any title which shall show or tend to show that the person assuming or advertising the same is a practitioner of any of the branches of medicine) in such a manner as to convey the impression that he or she is a legal practitioner of medicine, or of any of its branches, without having legally received the medical degree, or without having received a license which constituted at the time an authority to practice medicine under the laws of this state then in force, shall be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not more than one hundred dollars or imprisonment for three months for the first offense; and on the conviction of any subsequent offense, by a fine of not more than two hundred and fifty dollars or imprisonment for not less than six months, or by both fine and imprisonment.

SECT. 13. Every person who is a practitioner of medicine and surgery in this state prior to the passage of this act shall be, upon satisfactory proof thereof to the regent and upon the payment of a fee of one dollar, entitled to registration; and the said regent shall issue to him a certificate signed by himself and the chairman and secretary of such board of medical examiners as the applicant may elect; and said certificate shall state the facts and the cause of said registration, and shall entitle the said person to practice medicine legally in the state of New Hampshire.

SECT. 14. The first meeting of the boards may be called by any one of the members by a notice in writing, stating the time and place of meeting, sent by mail to each of the other members at least one week prior thereto.

SECT. 15. This act shall take effect on its passage.

[Approved March 16, 1897.]

The examining boards appointed by the governor and council in accordance with the law are as follows:

From the New Hampshire Medical Society:

George H. Shedd, M. D., North Conway, term expires 1903.

John F. Robinson, M. D., Manchester, term expires 1904.

James T. Greeley, M. D., Nashua, term expires 1905.

Arthur C. Heffinger, M. D., Portsmouth, term expires 1906.

George Cook, M. D., Concord, term expires 1907.

President, Dr. Cook; secretary, Dr. Greeley.

From the New Hampshire Homeopathic Medical Society:

Robert H. Hazelton, M. D., Lebanon, term expires 1903.

George H. Morrison, M. D., Whitefield, term expires 1904.

Robert V. Sweet, M. D., Rochester, term expires 1905.

Arthur J. Todd, M. D., Manchester, term expires 1906.

George W. Flagg, M. D., Keene, term expires 1907.

President, Dr. Flagg; secretary, Dr. Hazelton.

From the New Hampshire Eclectic Society :

Ezra C. Chase, M. D., Orford, term expires 1903.

Enos Huckins, M. D., Plymouth, term expires 1904.

Lester Rupert Brown, M. D., Winchester, term expires 1905.

Walter H. True, M. D., Laconia, term expires 1906.

Francis L. Gerald, M. D., Belmont, term expires 1907.

President, Dr. True ; secretary, Dr. Chase.

I recommend some amendment to the law which shall insure participation in the duties of the boards of medical examiners by all the members. As the law now stands, the members share equally in the distribution of the revenue from licenses, although they may never attend a meeting of the boards, and never contribute any questions, as required by law.

The registered practitioners licensed between January 1, 1901, and November 1, 1902, are classified as follows :

A.	In practice in the state prior to the enactment of the law	11
B.	Admitted by examination	22
C.	Admitted by indorsement of diploma	36
Total		69

Total number of licenses issued since the enactment of the law, nine hundred and forty-six ; of these, six have been revoked.

Three examinations have been held since January 1, 1901, viz. : June 11, 12, 1901 ; December 10, 11, 1901 ; June 10, 11, 1902, with results shown in the following table :

MEDICAL EXAMINATIONS.

EXAMINATION.	Date.	Men.	Women.	Regular.	Homeopathic.	Eclectic.	Whole number examined.	Licensed.	Rejected.
Ninth.....	June, 1901	3	2	3	2	.....	5	5	....
Tenth.....	Dec., 1901	9	2	10	.....	1	11	10	1
Eleventh.....	June, 1902	9	.....	9	.....	.....	9	7	2*
		21	4	22	2	1	25	22	3

* One candidate who failed at previous examination.

NINTH EXAMINATION.

JUNE 11 AND 12, 1901.

Therapeutics (N. H. Medical Society).

1. Differentiate variola from the other exanthemata.
2. Give its therapeutics.
3. Differentiate cholera infantum from the other intestinal diseases of childhood.
4. Give its therapeutics.
5. Differentiate acute poliomyelitis from typhoid fever.
6. Give its (acute poliomyelitis) therapeutics.
7. What are the most frequent causes of cerebral abscess?
8. How differentiated from meningitis?
9. Give the therapeutics of chorea.
10. Give the therapeutics of acute broncho-pneumonia.

Therapeutics (N. H. Homeopathic Society).

1. Give seven grand characteristics of arsenious acid.
2. What is an important key-note for pokeroot?
3. What is the general action of argentum nitricum?
4. Give the general action of mandrake.
5. Give the diarrhœa of croton tiglium.
6. Give the grand action of rhus tox.
7. What is the physiological action of bryonia?
8. What are the alkaloids of ignatia?
9. What is the general action of veratrum album?
10. Give six characteristic symptoms of phosphorus.

Chemistry.

1. What is the difference between milk sugar and cane sugar, and how determined?
2. What is albuminoid ammonia and what does it indicate if found in drinking water?

3. Why is permanganate of potassium a good disinfectant?
4. Give a quick test for lead in solution; for arsenic in solution.
5. In what does chemically pure soap consist? How does it differ if at all from the ordinary commercial varieties?
6. What important part does carbonic acid play in plant life?
7. How does starch differ in constitution from glucose?
8. From what source do animals obtain the energy necessary for existence?
9. Whence do plants draw the energy needed for the organization of their food?
10. What is absolute alcohol?

Surgery.

1. Give pathological sequence of inflammation.
2. Describe amputation through forearm.
3. Give mode of reducing dislocation of lower jaw.
4. How would you operate for pelvic abscess?
5. How should a penetrating wound of the knee-joint be treated?
6. Give treatment of fracture of base of the skull.
7. Give your treatment for stenosis of the lacrymal duct.
8. What is the treatment of intra-cranial suppuration?
9. Give operation for hair lip.
10. Give operation for foreign body in ear.

Anatomy.

1. Name the structures that compose and are in immediate connection with the eyeball.
2. Give the anatomy and the position of the normal heart.
3. Give the anatomy of the whole auditory apparatus.
4. What fluids of the body are intended for its nutrition?
5. What is the location of the right kidney, and what viscera are in relation to it?

6. What are the principal parts of the nervous system?
7. Describe the cartilages of the larynx.
8. Name the bones of the tarsus, and give their articulations.
9. Describe the femoral artery.
10. Locate and describe the stomach.

Pathology and Diagnosis.

1. Give symptoms in morbid anatomy of acute yellow atrophy of the liver.
2. Mention the causes and effects of mitral incompetency.
3. Give the symptoms of chlorosis.
4. Mention the causes and symptoms of uræmia.
5. Give the symptoms and possible complications of mastoid abscess.
6. Give diagnosis and pathology of thoracic dropsy.
7. Give diagnosis and pathology of neuritis.
8. Give diagnosis and pathology of aphasia.
9. Give diagnosis and pathology of hysteria.
10. Give diagnosis and pathology of sunstroke.

Obstetrics.

1. What is prolapse of the funis? What treatment is indicated?
2. Give cause, diagnosis, prognosis, and treatment of tympanites.
3. State causes for the induction of premature labor.
4. What is the treatment in protracted labor of the first stage, where the head fails to engage?
5. What is superetation?
6. Describe the difference between true and false pains.
7. What are the causes, symptoms, and dangers of abortion?
8. Give cause and treatment of post-partum hemorrhage.
9. Describe the beginning of the second stage.
10. Give cause and treatment of puerperal fever.

Physiology and Hygiene.

1. Name two important ductless glands in the body; give their physiology.
2. What digestive fluid is secreted in the intestinal canal; source and function?
3. Define carbo-hydrates and hydro-carbons; give examples of both.
4. What diseases should be reported to the board of health? How soon?
5. What is the best natural germ-killer for individuals?
6. What is the average quantity of air daily used by one person in respiration.
7. What is the function of perspiration?
8. What part of the nervous system is always affected in locomotor ataxia?
9. Describe capillary circulation.
10. Describe coagulation of blood.

TENTH EXAMINATION.

Therapeutics (Eclectic).

1. Give therapy of *grindelia robusta*.
2. What are the symptoms calling for minute doses of potassium bichromate?
3. What remedies would you employ for engorgement of the liver and jaundice?
4. Give definition of inflammation.
5. Give symptoms and treatment of follicular tonsilitis.
6. What are the specific indications for *rhus tox*.
7. Give symptoms calling for small doses of *ippecac*.
8. From what is *caroid* made and for what is it principally used?
9. Give specific symptomatology of sodium sulphite.
10. Give indications for *amygdalus persica*.

Therapeutics (N. H. Medical Society).

1. Give the physiological effect of alcohol.
2. Give the physiological effect of strychnia.
3. Describe epidemic cerebro-spinal meningitis.
4. From what diseases is the above, sometimes, difficult to distinguish?
5. Give the therapeutics of acute articular rheumatism.
6. Give the physiological effect of digitalis.
7. Give a comparison of incubative periods and courses of measles, varicella, and variola.
8. Give the principal causes of acute diffuse nephritis.
9. Give the therapeutics of acute Bright's disease.
10. Give ten preparations of opium.

Chemistry.

1. How is the density of liquids affected by temperature?
Is, or is not, water an exception to other liquids in this regard?
2. How does heat affect the relationship of molecules?
3. How does decanting differ from filtering?
4. What is the chemical difference between Paris green and arsenious acid?
5. Why is oxygen essential to animal life?
6. What does albuminous ammonia mean if found in drinking water?
7. What do you consider the best test for sugar in the urine? Describe fully.
8. Why does an oxalic acid solution remove potassium permanganate stains from the hands?
9. Explain as fully as possible the formation of gall-stones.
10. How would you treat a case of opium poisoning?

Surgery.

1. Give symptoms of and operative treatment for impacted common bile duct.
2. Give symptoms of intestinal perforation, and describe operative procedure for relief.

3. Describe the different shoulder dislocations, and give technic of reduction in each.
4. Define primary and secondary hemorrhage.
5. Describe Pott's fracture and give treatment.
6. Give differential diagnosis between cerebral concussion and compression.
7. Give technic for complete operation in mammary cancer.
8. Prepare room in private house for capital operation.
9. Give post-operative complications in hysterectomy.
10. Describe operative technic for paracentesis thoracis.

Anatomy.

1. Of what bones is the wrist joint composed and what kind of an articulation is it?
2. Describe the ear, including each of the component parts.
3. What are the chief plexuses of the sympathetic nervous system?
4. Describe the brachial artery.
5. Give origin, course, and branches of the fifth pair cranial nerves.
6. Describe the lachrymal apparatus.
7. Describe the circle of Willis.
8. How are the veins divided?
9. What are the lymphatics?
10. Describe the uterus and its appendages.

Pathology and Diagnosis.

1. Give diagnosis of opium poisoning.
2. Give pathology and diagnosis of mumps.
3. Give pathology and diagnosis of lead poisoning.
4. Give pathology and diagnosis of hay-fever.
5. Give pathology and diagnosis of tetanus.
6. Mention the symptoms caused by tumor of the kidney, also the different tumors which may develop in the kidney.
7. Mention the causes of emphysema of the lungs.

8. Describe a typical case of acute peritonitis.
9. Give the diagnosis of intestinal ulcers occurring independently of typhoid fever.
10. Mention some of the causes of ptomaine poisoning and describe a case.

Obstetrics.

1. Mention the signs of positive proof of pregnancy.
2. What are the causes of uterine hemorrhage?
3. How would you manage a case of breech presentation?
4. When is the induction of premature labor justifiable?
5. How is the apparent shortening of the cervix in pregnancy explained?
6. Name the different kinds of extra-uterine pregnancy.
7. Name the different abnormalities of the placenta.
8. Give cause and treatment of post-partum hemorrhage.
9. Outline full treatment of lacerated perineum.
10. Describe the fœtal circulation.

Physiology and Hygiene.

1. What mucous membrane differs from all others; give its physiological peculiarity.
2. What is the action of the diaphragm; describe in detail.
3. What one substance is found in greatest abundance in the human body; function?
4. Describe the process of deglutition; nerve supply.
5. What acid is found in the gastric juice? How formed?
6. Describe your process of disinfecting a room with formalin.
7. Name two so-called preventable diseases; how would you prevent?
8. What is simple filtration of water for domestic supply; how produced and what result?
9. What effect has impure water upon the public health?
10. What is the difference between a catch-basin and a cess-pool?

ELEVENTH EXAMINATION.

JUNE 10 AND 11, 1902.

Materia Medica, Therapeutics (N. H. Medical Society).

1. Define therapeutics.
2. Give the therapeutics of acute catarrhal dysentery.
3. Give indications and contra-indications for the use of opium.
4. Clinically, does rheumatism in children differ from that in adults and, if so, why?
5. What pathological conditions call for the use of opium?
6. Give a clinical description of catarrhal appendicitis and outline its treatment.
7. Give the therapeutics of typhoid fever.
8. Give indications and contra-indications for the administration of quinine.
9. Give a clinical description of laryngismus stridulus and give treatment.
10. Give therapeutics of pulmonary tuberculosis.

Chemistry.

1. What is hard water?
2. What are the properties of nitric acid?
3. What is calomel, and how obtained?
4. How do we obtain ether?
5. What is uric acid?
6. Why is permanganate of potassium a good disinfectant?
7. Explain the composition of bichromate of potassium.
8. What constitutes heat?
9. Describe the manufacture of arsenious acid.
10. Where is "saltpetre" obtained? What is the chemical name and for what is it chiefly used?

Surgery.

1. Give the treatment of varicose veins.
2. Describe your treatment of fracture of the patella.
3. Under what circumstances would you prefer chloroform as an anæsthetic?
4. Give the indications for use of trephine.
5. Give differential diagnosis between concussion and compression of the brain.
6. Give symptoms and treatment of fracture of the clavicle.
7. Give dislocations of the humerus and describe reduction by simple extension.
8. At what point would you amputate for gangrene of foot?
9. Give technic for decapsulating kidney in chronic Bright's disease.
10. What instruments are necessary in operation for appendicitis?

Anatomy.

1. Give the structure of the eyeball.
2. Give in detail the circulation of the liver.
3. Name the fixations of the bladder.
4. Enumerate and describe the bones of the forearm, and give their articulations.
5. Enumerate and describe the ligaments of the pelvis.
6. Enumerate the sinuses of the brain.
7. Describe the prostate gland.
8. What is the difference between voluntary and involuntary muscle fibre? Give an example of each, and one of both.
9. Name all the parts that compose the anterior abdominal wall, and fully give direction of the muscle fibres of each muscle concerned in the same.
10. Give the anatomy of the larynx.

Pathology and Diagnosis.

1. Give pathology and diagnosis of cerebral apoplexy.
2. Give pathology and diagnosis of angina pectoris.
3. Give pathology and diagnosis of cerebral anæmia.

4. Give pathology and diagnosis of cerebro-spinal meningitis.
5. Give pathology and diagnosis of asthma.
6. Describe the conditions found in death from sunstroke.
7. Give the symptoms produced by hydatids of the liver.
8. Describe a case of acute lead poisoning.
9. Mention the causes of cerebral abscess.
10. Mention the symptoms and complications which may occur in aneurism of the aorta.

Obstetrics.

1. Describe normal labor by stages.
2. What are the causes of uterine hemorrhage?
3. How would you treat a case of retained placenta?
4. How would you treat puerperal convulsions occurring before labor?
5. What is superfetation?
6. Give diagnosis, prognosis, and treatment of face presentation.
7. Distinguish between pregnancy and fibroid tumor of the uterus.
8. What are the principal causes of sterility in the woman?
9. What are the causes, symptoms, and dangers of abortion?
10. Give cause, symptoms, and outline treatment of puerperal fever.

Physiology.

1. What is the cause of the acidity of the gastric juice?
2. Describe peristaltic motion of stomach and intestines.
3. What is the effect of destroying the medulla oblongata?
4. Why is food that is tasteless, although nutritive, digested with difficulty?
5. Why are green vegetables healthful as articles of diet?
6. Discuss physiologically the action of alcoholic drinks taken into the system.

7. What is the influence of the respiratory movement upon the normal pulse curve?
8. Where is the vasomotor center located? Over what does it preside?
9. Mention three so-called preventable diseases. How would you prevent in each instance?
10. What is the mode of propagation of communicable diseases?

REGISTERED PHYSICIANS.

The entire number of practitioners of medicine and surgery registered at this date (November 1, 1902) is nine hundred forty. A complete list is here given.

"A" is used to designate those who were in practice prior to the passage of the law; "B," those who have passed the examination; "C," those graduates of a New Hampshire medical school whose diplomas have been indorsed.

A	Abbott, Alfred W.	Laconia
A	Abbott, Charles Benjamin	Bradford
A	Abbott, Clifton S.	Laconia
B	Abbott, Edson Moses	Rochester
A	Abbott, Ezra Walker, Ec.	Concord
B	Abbott, Florence Hale	Wilton
A	Abbott, George F.	Littleton
A	*Abbott, Lillian E.	Concord
A	Abbott, Oscar Dunreath	Manchester
A	Abbott, Walter H.	Bradford
A	Adams, Chancey	Concord
A	Adams, Charles W., Hom.	Franklin
A	Adams, Daniel S.	Manchester
A	Adams, Ira H.	West Derry
B	Adams, Walter Forrester, Hom.	Waltham, Mass.
C	Albright, Clifford Brandt	Keene
A	Aldrich, Ezra Barnes	Manchester
A	Aldrich, Walton H.	Marlborough
A	Alexander, Anson C., Hom.	Penacook
A	Allen, Arthur Norman, Hom.	Tewksbury, Mass.
A	Allen, Bradford	Nashua
A	Allen, Clarence Jean	Winchester, Mass.
A	Allen, Walter Algeno	Hampstead
B	Allin, Fred Andrea	West Stewartstown

* Deceased.

A	Ames, Andrew Almon, Ec.	. . .	Dover
A	* Andrews, Burt . . . . .	. . . . .	Rochester
A	Andrews, Ezekiel Bennett . . . . .	. . . . .	Ossipee
A	Angulo, Alensandro		
A	Annable, Edwin G. . . . .	. . . . .	Concord
A	Annis, Ai Stillman, Hom. . . . .	. . . . .	Rochester
A	Anthoine, Isaac Gilman . . . . .	. . . . .	Nashua
A	Atherton, Ella Blaylock . . . . .	. . . . .	Nashua
A	Atkinson, Leonard Woods, Hom.		
A	Axtell, John Fremont . . . . .	. . . . .	Newton
A	Bachelor, Mary W. . . . .	. . . . .	New Hampton
C	Baker, Benjamin Ward . . . . .	. . . . .	New Boston
A	Baker, Cyrus E. . . . .	. . . . .	Claremont
C	Bakeman, Francis Albert . . . . .	. . . . .	Franklin
A	Baketel, Harrie S. . . . .	. . . . .	Boston, Mass.
C	Baketel, Roy Vincent . . . . .	. . . . .	Taunton, Mass.
B	Baldwin, Harrison P., Hom. . . . .	. . . . .	Boston, Mass.
C	Ballard, Clarence Pressey . . . . .	. . . . .	Canterbury
A	Bancroft, Charles P. . . . .	. . . . .	Concord
B	Barbrick, John Fraser . . . . .	. . . . .	Boston, Mass.
A	Barker, Justin Starr . . . . .	. . . . .	Kennebunk, Me.
C	Barker, Ralph Higgins . . . . .	. . . . .	Chester
B	Barnes, Harry Aldrich . . . . .	. . . . .	Boston, Mass.
A	Barnes, Walter R. . . . .	. . . . .	Orford
A	Barnett, Henry, Ec. . . . .	. . . . .	Lancaster
A	Barney, J. Sarah, Hom. . . . .	. . . . .	Franklin
A	Basch, William A. . . . .	. . . . .	Ashuelot
B	Bates, John Howard . . . . .	. . . . .	East Rochester
C	Bates, Willard Asa . . . . .	. . . . .	Palmer, Mass.
B	Beardsley, Fred Nickerson . . . . .	. . . . .	New York, N. Y.
C	Beaton, Alexander Angus . . . . .	. . . . .	Salisbury
A	Beattie, William Johnston . . . . .	. . . . .	Littleton
A	Beauclerk, William Preston . . . . .	. . . . .	Contoocook
A	Beaudet, Louis Philippe, Ec. . . . .	. . . . .	Newmarket
C	Beaudoin, Bennett Mortimer Roland.		
C	Beckford, Henry Shedd . . . . .	. . . . .	Belmont
A	Beckley, George Hallam . . . . .	. . . . .	Derry

* Deceased.

C	Beckwith, Henry Witter	.	.	.	Norwich, Conn.
A	Beers, Elbridge G., Ec.	.	.	.	Plainfield
A	Bell, Ernest Lorne	.	.	.	North Woodstock
B	Belt, Edward Jones	.	.	.	Enfield
A	Bennett, Clara Hutchinson, Ec.	.	.	.	Dover
A	Bennette, George Roby	.	.	.	Hampstead
A	Bernier, Edmond.				
A	Berry, Herman Irving.	.	.	.	Wolfeborough
A	Berry, John James	.	.	.	Portsmouth
A	Berube, Pierre	.	.	.	East Candia
C	Bisbee, Walter G.	.	.	.	Hanover
A	Bishop, Channing, Hom.	.	.	.	Bristol
A	Bixby, Ernest P.	.	.	.	Francestown
C	Black, James S.	.	Deer Island, Boston Harbor, Mass.		
B	Blair, Frank Weeks	.	.	.	Farmington
A	Blaisdell, Frank	.	.	.	Goffstown
A	Blaisdell, George Clark	.	.	.	Contoocook
A	Blanchard, Roscoe G.	.	.	.	Dover
A	Blanchard, Walter Irving	.	.	.	Mont Vernon
A	Blazo, Charles	.	.	.	Rochester
A	Bloom, David N.				
A	Bogardus, Frank A.	.	.	.	Canaan
A	Bolster, Augustus S.	.	.	.	Belmont
A	Boutwell, Henry Thatcher	.	.	.	Manchester
A	Boutwell, Henry Winslow	.	.	.	Manchester
A	Bowker, Charles Harvey	.	.	.	Berlin
A	Boynton, Charles H.	.	.	.	Lisbon
A	Boynton, Harry Hollister	.	.	.	Lisbon
A	Boynton, Oren Hart	.	.	.	Lisbon
A	Bradley, Oscar H.	.	.	.	Jaffrey
A	Brien, Augustus, A. E.	.	.	.	Manchester
A	Brigham, Frank E.	.	.	.	Salmon Falls
A	Brockway, Daniel G.	.	.	.	Lebanon
A	Bronson, Austin S.	.	.	.	New Hampton
A	Brooks, Nathaniel G.	.	.	.	Charlestown
B	Brown, Elmer F.	.	.	.	Groveton
A	Brown, George H.	.	.	.	Gilmanton

B	Brown, Harry Alburtus	.	.	.	Boston, Mass.
A	Brown, James Frances	.	.	.	Manchester
A	Brown, James Scribner	.	.	.	Manchester
B	Brown, John Bean, Hom.	.	.	.	Fergus Falls, Minn.
B	Brown, Lester Rupert, Ec.	.	.	.	Winchester
B	Brownrigg, Albert Edward	.	.	.	Nashua
A	Bruce, Thomas Kitson, Ec.	.	.	.	Farmington
C	Bryant, John Edmund	.	.	.	Hanover
A	Bryar, Fred Elmer	.	.	.	Belmont
C	Buckley, James Joseph	.	.	.	Milton
C	Bugbee, Locke Harwood	.	.	.	North Pomfret, Vt.
A	Bullock, Lillian Gertrude, Ec.	.	.	.	Manchester
A	Burleigh, Robert F.	.	.	.	Braintree, Mass.
A	Burnham, Charles Henry	.	.	.	Jefferson
C	Burnham, Elisha Bennett	.	.	.	Rye
A	Burnham, Hosea B.	.	.	.	Manchester
A	Burnham, John Loring	.	.	.	Manchester
A	Burns, Robert	.	.	.	Plymouth
B	Burt, Edward Daniel	.	.	.	North Woodstock
A	Buswell, Albert Currier	.	.	.	Epping
A	Butler, Jacob Newton	.	.	.	Lempster
A	Butler, John Freeman	.	.	.	Spoofford
A	Buzzell, Charles P.	.	.	.	Conway
A	Byrnes, Ambrose Guy	.	.	.	Harrisville
A	Cain, J. Leavitt	.	.	.	Newport
B	Cain, Willie George	.	.	.	Epping
B	Caissac, Louis P.	.	.	.	Littleton
A	Call, Henry Clay	.	.	.	
A	Calley, George H.	.	.	.	Bristol
A	Campbell, George Abbott, Hom.	.	.	.	Manchester
A	*Carbee, Samuel Powers	.	.	.	Haverhill
A	Carlton, Elmer Howard	.	.	.	Hanover
B	Caron, Damase	.	.	.	Franklin
A	Carpenter, Harry B.	.	.	.	Lancaster
A	Carpenter, Irving Lloyd	.	.	.	Manchester
C	Carr, Burt Wilbur	.	.	.	Nashua
A	Carr, Edgar L.	.	.	.	Pittsfield

* Deceased.

A	Carter, William G.	Concord
A	Carvelle, Henry DeWolfe	Manchester
B	Cate, George Riley	Conway
A	Catellier, Alfred	Berlin
B	Cawley, Ernest Guy	Haverhill, Mass.
A	Champagne, Joseph C. A., Hom.	Berlin
A	Chandler, Frederick	Amherst
A	Charest, Joseph Amidie	Nashua
A	Charest, Joseph Charles Benonie	Greenville
B	Chase, Edwin L.	Concord
A	Chase, Ezra Clark, Ec.	Orford
A	Cheever, Benjamin	Portsmouth
A	Cheever, Nathaniel F.	Greenfield
A	Cheney, Harry Applebee	Campton Village
A	Cheney, Jonathan M.	Ashland
B	Chesley, Alice Maud Mary	Exeter
A	Chesley, Andros Palmer	Concord
C	Chesley, Harry O.	Barrington
C	*Chesley, Verner Lewis	Boston, Mass.
A	Chesnutt, Arthur Allen, Hom.	Antrim
A	Child, William	Highland Lake, Va.
A	Chirurg, Charles	Manchester
A	Christie, Morris, Hom.	Antrim
B	Christophe, Herman	Manchester
A	Claggett, Fred Porter	Newport
A	Clark, David S.	Derry
A	Clark, Edgar A.	Concord
A	Clark, George Frederick	Nashua
A	Clark, Levi	Pittsfield
A	Clough, George Henry	Wolfeborough
A	Cobb, Joseph J.	Berlin
A	Cogswell, John R.	Warner
A	Cogswell, Samuel Johnson	Warner
A	Colby, Frank Edgar	Bow
A	Colby, Myron Morton, Hom.	Warner
A	Colcord, Daniel Webster	Seabrook
A	Cole, Cheney Isaac	Henniker

* Deceased.

A	Collity, James Michael, Ec.	. . .	Manchester
B	Congdon, Charles Everett	. . .	Nashua
A	Conn, Granville P.	. . .	Concord
C	Cook, Charles Henry	. . .	Concord
A	Cook, Edwin A.	. . .	Colebrook
A	Cook, George	. . .	Concord
A	Cooke, T. Bates	. . .	Laconia
C	Coolidge, John Wesley	. . .	Bristol
A	Copp, George Wilbur, Hom.	. .	Melvin Village
C	Corbett, John Baptiste	. .	Providence, R. I.
A	*Corey, Charles	. . .	Manchester
A	Cotton, Curtis B.	. . .	Wolfeborough
A	Coutu, Joseph Edward	. . .	Whitefield
C	Cowern, Ernest William	. . .	Hopkinton
A	Cradlock, Ebenezer Benjamin, Ec.	. .	Concord
A	Cramm, William Edward.		
B	Crediford, David B.	. . .	Harrisville
C	Crittendon, Samuel Wright	. .	Newton, Mass.
B	Crosby, Walter Theodore	. . .	Manchester
C	Crosby, William Pierce	. . .	East Andover
A	Crossman, Edgar O.	. . .	Lisbon
A	Cummings, Alvah R.	. . .	Claremont
A	Cummings, Fred Eben	. . .	Pittsfield
B	Cummings, Frederick Russell	. . .	Concord
A	Curley, Clarence P.	. . .	Greenfield, Mass.
A	*Currie, Thomas H.	. . .	Lebanon
A	Currier, David M.	. . .	Newport
A	Currier, Edward H.	. . .	Manchester
A	Currier, George W.	. . .	Nashua
B	Cushman, Earl Percy	. . .	Claremont
A	Cutler, Charles Henry	. . .	Peterborough
A	Cutler, George I.	. . .	West Swanzey
B	Dame, Fred Russell	. . .	Franklin Falls
A	Dansereau, Pierre E.	. . .	Nashua
A	Darling, William W.	. . .	Newport
A	Davenport, George E.	. . .	Bath
A	Davis, George Moses	. . .	Manchester

* Deceased.

A	Davis, Gilman	Whitefield
A	Davis, Henry S., Hom.	Meredith
A	Day, Arthur Kehew	Concord
A	Day, Herbert Christopher	Exeter
A	Day, James A.	Waltham, Mass.
A	Dean, Elmer E.	Lebanon
A	Dearborn, Darius Stearns :	Milford
A	Dearborn, Frank A.	Nashua
A	Dearborn, John Jacob	Salisbury
A	Dearborn, Sam G.	Nashua
B	Dearborn, Sam Starrett	Nashua
C	De Gross, John H.	Manchester
B	DeMoulpied, Walter	Hemmingford, Que.
B	Dennison, Raymond Chase	Berlin
A	Dessaint, Fred.	
B	Dillon, Richard Hastings	Manchester
A	Dimick, George E.	Jefferson
A	Dinsmoor, Frank M.	Keene
A	*Dinsmoor, Silas M.	Keene
B	Dinsmore, Herman Hunter	Manchester
A	*Dix, Mahlon C.	Hinsdale
B	Dixon, James Henry	Portsmouth
A	Dodge, Charles E., Hom.	Manchester
A	Dodge, Clarence M.	Manchester
A	Dodge, Henry	Webster
B	Dolloff, Albert Simeon	New Hampton
A	Dougherty, Thomas James	Somersworth
A	Douglas, Orlando B.	Concord
A	Dowd, Arthur V.	Bristol
A	*Dowd, John Francis	Manchester
A	Dowlin, Oliver	Wolfeborough
A	Dowlin, Winfred Mason	Claremont
A	Drake, Charles B.	West Lebanon
A	Drake, Ervin Thayer	Franklin
A	Drew, John A.	Rumney
A	Duchene, Henry Francis J.	
A	Dunbar, Eugene B.	Manchester

* Deceased.

A	Dunham, William Russell	Keene
A	Durkee, Freeman Austin, Ec.	Lakeport
A	Duval, Ernest	Rochester
B	Dyer, William Henry	Providence, R. I.
A	Eames, Frederick Henry	Manchester
A	Eames, William Morse	Manchester
A	Eastman, Charles Albert	Brighton, Mass.
B	Eastman, Eugene Bruce	Portsmouth
A	Eastman, Isaac N.	Woodsville
A	Eastman, Oliver Davis	Woodsville
A	Eaton, Frank	East Weare
B	Edes, Robert Thaxter	Jamaica Plain, Mass.
A	Ela, Robert L.	
C	Elliott, William Thomas	Bartlett
A	Ellison, George Washington	Providence, R. I.
A	Elkins, Jeremiah Stephen	Farmington
A	*Emerson, Arthur Llewellyn	Chester
B	Emerson, George Short	Fitzwilliam
A	*Emery, Alfred Eastman	Penacook
A	Erskine, James B.	Tilton
A	Estes, Florella	Dover
C	Evans, Frank W.	Coös
A	*Fairbanks, Charles Albert	Dover
B	Farnum, Mary Louise Rolfe	Penacook
A	*Farrington, James	Rochester
A	Faulkner, Herbert Kimball	Keene
A	Fellows, George Roberts	Seabrook
A	Felt, Marcellus Hazen	Hillsborough
A	Ferguson, Arthur Clifford	Berwick, Me.
A	Ferguson, John	Manchester
A	*Ferguson, John David	Manchester
B	Ferguson, Samuel Thomas	
B	Fernald, Arthur May	Sutton
B	Fernald, Fred	Nottingham
A	Finerty, Joseph William, Hom.	Milford
A	Fisher, Edwin C.	Sunapee
A	Fisher, Franklin Pierce	Enfield Center

* Deceased.

A	Fisher, Thomas E., Hom.	.	.	Francestown
B	Fiske, George Varnum	.	.	Northwood Ridge
A	Flagg, George W., Hom.	.	.	Keene
A	Flanders, Charles F.	.	.	Manchester
A	Flanders, Louis W.	.	.	Dover
A	Flanders, Marietta Ellis Monroe	.	.	Hopkinton
C	Folsom, Charles Albert	.	.	West Epping
A	Fontaine, Henri Theophile	.	.	Concord
A	Ford, Inez H.	.	.	Dover
A	Foster, Avery Moulton	.	.	Candia
B	Foster, Louis Everett	.	.	Mont Vernon
A	Foster, Timothy S.	.	.	Laconia
B	Fournier, Arthur.			
B	Fowler, Fred Abram	.	.	Hill
A	Fowler, Isaac Newton	.	.	Meriden
A	Frechette, George	.	.	Manchester
A	French, Albion H.	.	.	Pittsfield
B	French, Edward	.	.	Medfield, Mass.
A	French, L. Melville	.	.	Manchester
A	Frink, Louis J.			
A	Fritz, Emdon	.	.	Manchester
A	Frost, Gilman DuBois	.	.	Hanover
A	Fugere, Edouard Napoleon	.	.	Manchester
B	Fuller, George Frederick LeRoy.			
A	Gage, George Newton, Hom.	.	.	East Washington
A	Gallinger, Jacob H., Hom.	.	.	Concord
C	Gallinger, Ralph Ernest	.	.	Concord
A	Gardner, Guy Hubbard	.	.	New London
A	Garey, Alonzo Randall	.	.	Ashland
A	Garland, Willie Russell	.	.	Plymouth
C	George, Arthur Phillips	.	.	Haverhill, Mass.
A	George, Charles F.	.	.	Goffstown
A	Gerald, Francis Leverett, Ec.	.	.	Warren
B	Getchel, Stillman P.	.	.	Wolfeborough
A	Gibson, Charles Reed	.	.	Woodsville
B	Gibson, John Mitchell	.	.	Lisbon
A	Gifford, John Pearl	.	.	Randolph, Vt.

A	Gile, John Martin	.	.	.	.	.	Hanover
A	Gilman, Charles Sleeper	.	.	.	.	.	Suncook
A	Gilman, Louis Lincoln	.	.	.	.	.	Rochester
A	Girouard, Simion Joseph.						
A	Gleason, Aaron Rising	.	.	.	.	.	Keene
A	Gleason, John Hiram	.	.	.	.	.	Manchester
A	Golden, Robert Henry.						
A	Goodell, John	.	.	.	.	.	Hillsborough
A	Goodhue, David Putney	.	.	.	.	.	West Springfield
C	Goodwin, Harold Carl	.	.	.	.	.	Amesbury, Mass.
A	Goss, Ossian Wilbur	.	.	.	.	.	Lakeport
A	Gould, Albert Nason	.	.	.	.	.	Effingham Center
A	Gould, Charles Reade	.	.	.	.	.	Tilton
A	Gould, Chester Harlow, Hom.	.	.	.	.	.	Braintree, Mass.
A	Gould, Herbert D., Hom.	.	.	.	.	.	New Boston
A	Gould, True Morrill	.	.	.	.	.	Raymond
A	Gove, Anna M.	.	.	.	.	.	Whitefield
A	Gove, George Sullivan	.	.	.	.	.	Whitefield
A	Grady, John William.						
A	Grady, Thomas Ambrose.						
A	Grafton, Frank Willard	.	.	.	.	.	Concord
A	Grant, Albert Ernest	.	.	.	.	.	Durham
A	Grant, Daniel.						
A	Lindsey E.	.	.	.	.	.	Somersworth
A	Grappner, Max C.	.	.	.	.	.	Manchester
A	Gravel, Henri, Ec.	.	.	.	.	.	Epping
A	Graves, Eli E.	.	.	.	.	.	Boscawen
A	*Graves, Irving F.	.	.	.	.	.	Nashua
A	Graves, Josiah G.						
A	Greeley, Guy Hastings	.	.	.	.	.	Merrimack
A	Greeley, James Thornton	.	.	.	.	.	Nashua
A	Greeley, Phillip Hartsorn	.	.	.	.	.	Farmington
A	Green, Samuel H.	.	.	.	.	.	Newmarket
A	Greene, Frank Alonzo, Ec.	.	.	.	.	.	Moultonborough
A	Greene, Jared Alonzo, Ec.	.	.	.	.	.	Laconia
A	Greenlaw, S. N.	.	.	.	.	.	Conway
A	Griffiths, Watkin W.	.	.	.	.	.	Hillsborough

* Deceased.

B	Grimes, Jesse Rideout	.	.	Charlestown, Mass.
A	Grimes, Warren Parker	.	.	Hillsborough
A	Gross, Charles William	.	.	Milton Mills
A	Guerin, Moise	.	.	Manchester
A	Guertin, Auguste	.	.	Nashua
A	Guggenheim, Max Samuel.			
A	Guillet, Noel Eusebe	.	.	Manchester
A	Guptill, George Herbert	.	.	Raymond
A	Haley, Timothy Avans	.	.	Center Tuftonborough
A	Hall, Charles E.	.	.	Greenville
A	Ham, John Randolph	.	.	Dover
A	Hamblett, Lorenzo D., Ec.	.	.	Somersworth
A	Hammond, Charles Bartlett	.	.	Nashua
B	Hanaford, Howard A.	.	.	Grantham
B	Hanlon, Orville Leon	.	.	Ridlonville, Me.
B	Hannaford, Charles William	.	.	Portsmouth
A	Hanson, Caleb W.	.	.	Northwood Ridge
A	Harlan, James A.	.	.	Manchester
A	Harlow, Franklin Edwin	.	.	Windsor, Vt.
A	Harriman, A. H.	.	.	Laconia
B	Harrington, Charles Woodbury	.	.	Peterborough
A	Hart, Malcom A. H.	.	.	Milton
A	Harvey, Albion King Parris, Hom.	.	.	Somersworth
A	Harvey, James Barton	.	.	Chester
A	Harwood, Blake A. T.			
A	Harwood, Jane L., Ec.	.	.	Nashua
A	Haskell, Pearl Jenney	.	.	Union
A	Hatch, John Ralph	.	.	Centerville
A	Hatch, George B.	.	.	Newbury, Vt.
A	Hatch, George Windsor	.	.	Wilton
A	Hawkins, Frederick Lewis	.	.	Meredith
A	Hawley, G. H.	.	.	Barnstead Center
B	Hayes, Blanche Adelyn	.	.	Cambridge, Mass.
A	Hayes, Frederick Legro	.	.	Somersworth
A	Hayes, John Alfred	.	.	Somersworth
A	Hayford, Herbert Scott, Hom.	.	.	Quincy, Mass.
A	Hazard, George Stevens	.	.	Hollis

A	Hazelton, George William	Haverhill
A	Hazleton, Robert Harvey, Hom. . . .	Lebanon
C	Healey, Thomas Raymond . . .	Newburyport, Mass.
B	Hebb, Angus Gordon.	
A	Heffinger, Arthur Cowton	Portsmouth
A	Higgins, Clifford E.	Wilton
A	Higgins, George	Concord
A	Higgins, John Henry	Hillsborough Bridge
B	Hight, Clarence Eugene	Berlin
A	Hiland, Thomas.	
A	Hildreth, Henry A.	Bethlehem
A	Hildreth, Lewis George	Marlborough
A	Hill, Almon Ward	Concord
A	Hill, Edmund E.	Suncook
C	Hill, Ernest Linwood	Concord
A	Hill, Gardner C.	Keene
A	*Hill, Levi G.	Dover
A	Hill, Roscoe	Epsom
A	Hill, Thomas C.	Manchester
A	Hill, William D.	Northwood
A	Hilliard, William Avery	Stonington, Ct.
A	Hills, Frederick L.	Concord
A	Hinds, Jr., William Henry Weed, Hom. . .	Milford
C	Hoag, Albert Buffum	Sandwich
A	Hodgdon, Edwin Pickering	Lakeport
B	Hodsdon, Benjamin Frank	Manchester
A	Hodsdon, Ervin Wilbur	Centerville
C	Hoitt, George Barnard	Manchester
A	*Hoitt, George Cotton	Manchester
A	Holbrook, Henry Carroll	Penacook
A	Holcombe, Charles Henry	Brookline
A	Holt, James Parkhurst	Claremont
A	Holt, John D.	Berlin
A	Horne, B. Frank.	
A	*Hosmer, William Henry	Penacook
A	Houghton, Edward F.	Tilton
B	Houle, Anselme Eprem	Lebanon

* Deceased.

A	Hoyt, Jane Elizabeth	Concord
A	Huckins, Enos, Ec.	Plymouth
C	Huckins, Theron Howard	Plymouth
A	Humiston, Franklin G.	East Jaffrey
B	Hunt, Daniel Lawrence	Boston, Mass.
A	Hunt, George Washington	Cornish
A	Hunt, Mary Olive Ann	Manchester
A	Huntress, Eugene S.	Wolfeborough
C	Hurd, Benjamin Porter	Merrimack
B	Hutchins, Guy Howard	Auburn, Me.
A	Hutchinson, Herbert S.	Milford
A	Huyck, Clifford John, Hom.	Acworth
A	Hyde, Edward	Pelham
A	Hyland, Jesse Burdette	Keene
C	Ide, Philip Sheridan	Newport, Vt.
A	Jackson, Henry Chester	Canaan
A	Jackson, Joseph A.	Manchester
A	James, Herbert Wilkins, Hom.	Rochester
A	Jarvis, Leonard	Claremont
A	Jendrault, Henry Adolphus	Dover
A	Jewell, Henry Hiram, Hom.	Nashua
A	Johnson, Albion Wesley	Kittery, Me.
B	Johnson, Edward West	Walpole
A	Johnson, Henry Warren	Berlin
A	Johnson, Hiram Leonard	Franconia
C	Johnston, Charles Edward	Kittery Point, Me.
A	Jones, Charles Dana	Milton
A	Jones, Edwin E.	Colebrook
A	Jones, Fred P.	Goshen
A	Jones, Frederick William	New Ipswich
A	Jones, Seth Warner	Franklin Falls
A	* Jordan, Chester F.	Bradford
A	Joslin, Perry Edwin.	
B	Joyce, Charles Pitt Fid	Kingston
A	Junkins, William O.	Portsmouth
A	Kean, Michael Edward	Manchester
A	Keay, Forrest Lincoln	East Rochester

* Deceased.

B	Keay, Harry Chester	Worcester, Mass.
A	Kempton, Amanda Harriet, Hom. . . .	Newport
A	Kenney, John Erle	Keene
B	Kenniston, William Bèaman	Exeter
A	Kent, Maude, Hom. . . .	Boston, Mass.
B	Ketchum, Henry Barstow	Woodstock, Vt.
A	Kimball, George Morrill	Concord
A	King, Rufus H. . . .	Wolfeborough
C	Kingsford, Howard Nelson	Hanover
A	Kittredge, Frank Everett	Nashua
A	Knapp, Lee Victor	Danbury
A	Knight, Greenwood H., Hom. . . .	Laconia
A	Laberge, Pierre Germain	Manchester
A	Labrecque, Joseph Jerome Alphonse	Manchester
A	Ladd, Elmer E. . . .	Rumney Depot
C	Ladd, Samuel Tilden	New York City
B	Lafontaine, Gustave	Manchester
B	La France, Albert Joseph	Laconia
A	Lagacé, Joseph Alfred	Nashua
A	Lajoie, Mederic Thomas Gerin.	
A	Lake, Elmer Ellsworth	Hampstead
A	Lamb, Frank Wilson	Tilton
A	Lamb, Zenas Freeman	Enfield
A	Lamson, Charles Allen	Elkins
B	Lance, Arthur Joseph	Cabot, Vt.
C	Landman, Elbert Alonzo	Danville
A	Lanouette, Joseph Edouard Adolphe	Manchester
A	Larochelle, Joseph Eugene	Manchester
B	Larrabée, Ralph Clinton	Boston, Mass.
A	Lathrop, Moses Craft	Dover
A	Lauroin, Adelard	Holyoke, Mass.
A	Lavallée, Arsene	Berlin
A	Lavallee, Arthur Martial	Suncook
B	Lavoie Zenou Annable	Newmarket
B	Lawrence, Arthur Abbott	Milton, Mass.
A	Leavitt, James Mellen	Effingham
A	Leduc, Napoleon	Somersworth

A	Leet, George E.	Concord
A	Leet, James Andrew	Enfield
A	Leith, William H.	Lancaster
A	Lelaidier, Joseph Emile.	
A	Lemaitre, Joseph Edmond	Manchester
A	Lemay, Joseph Daniel	Manchester
A	Leonard, Frank E., Ec.	Groveton
A	*Leonard, William Smith	Hinsdale
A	Letourneau, Joseph N.	Laconia
B	Libbey, Charles Emerson, Hom.	Danville, Vt.
A	Libbey, Erving Asa	Rangeley, Me.
B	Libby, Mildred Augusta	Philadelphia, Pa.
A	Lightle, William E.	Berwick, Me.
C	Little, Charles S.	Laconia
A	Littlefield, Anna Maria	New London
A	Lobdell, Alban Judson, Hom.	Winchester
B	Locke, Anna Williard	New York
B	Locke, Eva M.	Nashua
A	*Locke, Frank B.	Berlin
C	Locke, George Scott, Jr.	Portsmouth
C	Lord, Charles Edward Dimmock	Biddeford, Me.
A	Lord, Lester Winslow	West Ossipee
A	Lougee, Arthur Jewett	New York
A	Lougee, George Woodworth	Freedom
B	Lougee, William Wheeler	Malden, Mass.
A	Lovejoy, Frank Howard	North Hampton
A	Loveland, Israel Albert	Gilsum
A	Lovering, Frank Samuel	Moultonborough
A	Lovering, Oscar Philander	Lynn, Mass.
B	Lowe, Ernest Whittier	Fremont
A	Luce, Thomas W.	East Rochester
A	Lufkin, Charles Mathewson, Hom.	Alstead
A	Lull, Mary Augusta, Hom.	Milford
A	Lundeville, Efveray Paul	St. Albans, Vt.
B	Lussier, Jules Grenon	Manchester
A	Lyons, William H. A.	Portsmouth
C	McBride, John	Barnard, Vt.

* Deceased.

B	McCabe, Denis John	Berlin
B	McClintock, Thomas Henry, Hom., Hillsborough Bridge	
B	McDonald, William Forbes	Rochester
A	McGahan, Charles Fourgead	Bethlehem
A	McGregor, George W.	Littleton
B	McIntire, Herbert Bruce	Cambridge, Mass.
A	McLaughlin, Frank W.	West Milan
A	McMurphy, Nelson William	Concord
A	McQuestion, Eugene Forrest	Nashua
A	MacDonald, Joseph William Dugald	Manchester
A	Mack, William B.	Hampton
B	Macleay, Alfred Alexander	Kingston
A	Maloney, William E.	Keene
A	Manahan, Valentine	Enfield
A	Manchester, Frank Constant	Grafton
A	*Manning, Charles A., Ec.	Manchester
B	Manix, Edward Tuck	Exeter
A	Marble, Henry	Gorham
A	Marclay, Walter J., Hom.	
B	Marcou, Louis Benjamin	Berlin
A	Marden, Albert Lewis	Claremont
A	Marden, Albion Sullivan	Newport
A	Marsh, Franklin F.	Claremont
C	Marshall, Augustus T.	Boston, Mass.
B	Marston, Albert Jeremiah	Plymouth
A	Marston, Enoch Quimby	Sandwich
A	Martin, Wilbur G.	Madison
A	Mason, Robert	Exeter
A	Mason, Frank Lemuel	Belmont
A	Massicotte, Louis Charles Philippe, Ec.	Wilton
A	Matte, Napoleon	Keene
A	Matthews, Walter Colfax	Walpole
A	Maynard, Oswald	Nashua
A	Megrath, William Augustus	Loudon
A	Merrill, John F.	Warner
A	Merrill, Sidney Aaron	Belmont
C	Merrill, Walter Emery	Union Village

* Deceased.

C	Meserve, John Shackford	Dover
B	Miller, Elmer Manton	Woodsville
B	Milliken, Walter S.	Bartlett
A	Mitchell, Abram W.	Epping
A	Mitchell, Ezra	Lancaster
A	Mitchell, William H.	Loudon
A	Monge, Joseph	Laconia
A	Mooar, Jacob Washington	Manchester
A	Moran, Benjamin George	Nashua
A	Morey, Gustavus Bartlett	Manchester
A	Morgan, George Prentiss	Dover
A	Morrill, Alpheus Baker, Hom. . . .	Concord
A	Morrill, Ezekiel, Hom.	Concord
A	Morrill, Leonard B.	Center Harbor
A	Morrill, Shadrach C.	Concord
B	Morrill, Sibley Gage	Concord
A	Morris, John A.	
A	Morrison, G. H., Hom.	Whitefield
A	Morse, Charles A.	Newmarket
A	Morse, Harry Martin, Hom. . . .	Peterborough
B	Morse, John Hinckley	Concord
A	Morse, Martin V. B., Hom. . . .	Manchester
A	Muchmore, Alonzo Downing, Ec. . .	Plymouth
A	Mudgett, John Herbert,	Dover
A	Mullen, John	Portsmouth
A	Munsey, George Franklin	Suncook
B	Murray, John Thomas	Manchester
A	Mygatt, Harry Edwin	Franklin Falls
A	Naylor, Thomas, Ec.	
A	Neal, John Herbert	Rochester
C	Nelson, David	Boston, Mass.
A	Newcomb, Charles	North Haverhill
A	Newcombe, Vesley Marvin	Somersworth
B	Newell, Harry Ward	Strafford Center
A	Newell, Henry E.	Derry Depot
A	Newton, LeRoy Allen	Greenfield, Mass.
B	Nobles, William Calvin Ellicott, Hom. .	Littleton

A	Noyes, Edmund Herbert	. . . .	Plaistow
A	Noyes, Harold V.	. . . .	Berwick, Me.
B	Noyes, Wilbur Fisk, Hom.	. . . .	Lowell, Mass.
A	Nute, William Herbert	. . . .	Exeter
A	Nutter, Charles F.	. . . .	Nashua
A	Nutter, George W.	. . . .	Salmon Falls
A	Nutting, Mary A.	. . . .	Meredith
A	Nutting, Newell Curtis	. . . .	Meredith
A	Nutting, William, Ec.	. . . .	East Concord
A	Nutting, Will Wallace, Hom.	. . . .	Weirs
A	Ober, Charles F.	. . . .	Milford
A	O'Brien, Emile A. Young, Hom.	. . . .	Lisbon
A	O'Brion, Charles C.	. . . .	Groveton
B	O'Brion, Dennis Joseph	. . . .	Portland, Me.
A	O'Carroll, Martin	. . . .	Berlin
A	Odell, Joseph Warren	. . . .	Greenland
A	Oliver, Robert Freeman	. . . .	Alstead
B	Osterhout, John Jacob	. . . .	Gilsum
A	Otis, Edward Osgood	. . . .	Exeter
A	Packard, George Henry	. . . .	Derry Depot
A	Page, Benjamin F.	. . . .	Littleton
B	Page, George Thornton	. . . .	Cambridge, Mass.
A	Page, John Marshall	. . . .	Littleton
A	Palmer, Clarence Alanson.		
A	Palmer, Haven	. . . .	Plymouth
A	*Parker, Edwin K.	. . . .	Littleton
A	Parker, George Henry	. . . .	Wells River, Vt.
A	Parker, Henry Rust	. . . .	Dover
A	Parker, John C.	. . . .	Farmington
A	Parker, John S.	. . . .	Farmington
A	Parsons, John W.	. . . .	Portsmouth
A	Parsons, Warren	. . . .	Rye
A	Parsons, William Moody	. . . .	Manchester
A	Pattee, John Ralph, Ec.	. . . .	Dover
A	Pattee, William H.	. . . .	Manchester
A	Patterson, Charles Frederick	. . . .	Rye
A	*Peabody, Leonard Wood	. . . .	Henniker

* Deceased.

A	Pease, Byron Douglass	Greenville
A	Peaslee, Benjamin D., Hom. . .	Hillsborough Bridge
B	Pender, George Edward	Portsmouth
A	Pepin, Joseph Raoul	Suncook
B	Perkins, Anne Elizabeth, Hom.	
B	Perkins, Everett Clifton . . .	Wells Branch, Me.
A	Perkins, Frank B.	Derry
A	Perkins, Frederick	Manchester
A	Perkins, Marshall	Marlow
A	Perreault, Roch	Franklin Falls
A	Perry, William G.	Exeter
A	Petit, A. Wilfred	Nashua
A	Pettingill, James Buchanan . .	Amherst
A	Phipps, Albert G.	Gorham
A	Pierce, George W.	Winchester
A	Pike, Forrest Wiley	Greenland
A	Pike, John G.	Dover
A	Pitman, Arthur John	Candia
C	Platts, Harry S.	Troy
A	*Potter, Frederick E.	Portsmouth
A	Porter, George, Hom.	Manchester
C	Pratt, Harry Sumner	Bethlehem
A	Pratte, Arthur A.	Hinsdale
A	*Presby, James M.	Salem
A	*Presby, William H.	Salem
A	*Prescott, Royal Blood	Nashua
A	Price, Walter Herbert	Somersworth
B	Proctor, John Donald	Keene
C	Proctor, John Harvey	Hanover
C	Provost, Azarie Moise Joseph . .	Berlin
A	Prouty, Ira Joslin	Keene
B	Pulsifer, Tappan Chase	Auburn, Me.
A	Quackenbos, John Duncan . . .	New London
A	Quimby, John Grant	North Sandwich
C	Quinn, Charles Henry	West Concord
A	Reed, Elizabeth Boss	Keene
A	Remick, Edwin	Tamworth

* Deceased.

A	Reynolds, Thomas O.	. . . .	Kingston
A	Richard, Joseph Henry	. . . .	Dover
A	Richards, Louis Joseph, Ec.	. . . .	Franklin Falls
A	Richards, Paschal B., Ec.	. . . .	Bradford
A	*Richardson, Abel Parker.		
A	Richardson, Leonard E.	. . . .	Newport
A	Richardson, William	. . . .	Londonderry
A	Richmond, Allen P.	. . . .	Dover
A	Rix, James M.	. . . .	Warner
B	Robb, William Matthews	. . . .	Marlow
A	Robbins, Elwin DeWitt	. . . .	Nashua
C	Robert, Kennedy F.	. . . .	Owego, N. Y.
A	Roberts, James Stanton	. . . .	Newmarket
A	Roberts, Samuel Woodbury	. . . .	Wakefield
A	Robinson, Frank Lawrence.		
A	Robinson, Herbert Winslow	. . . .	West Medford, Mass.
A	Robinson, J. Franklin	. . . .	Manchester
B	Robinson, Wallace Wilson	. . . .	Union
A	Robinson, William Perry	. . . .	Ayers Village, Mass.
A	Roby, George F., Hom.	. . . .	Penacook
A	Rodier, Charles Seraphin	. . . .	Manchester
B	Rogers, Charles Cummings	. . . .	Union
A	Rogers, Tristram, Hom.	. . . .	Plymouth
A	Root, Stephen E.	. . . .	Rochester
C	Rowe, Arthur James	. . . .	Andover
A	Rowe, Frank Herbert	. . . .	Manchester
C	Rowe, Walter Cilley	. . . .	Concord
A	Rounsevel, Charles Sedgwick, Hom.	. . . .	Nashua
A	Roy, Joseph Edmond Egide	. . . .	Manchester
A	Russell, Ai Stephen, Ec.	. . . .	Rumney
A	Russell, Fred Cutler	. . . .	Newbury, Vt.
A	Russell, Julia Wallace	. . . .	Concord
C	Russell, Walter Burton	. . . .	Springfield, Mass.
A	Russell, William Bartlett	. . . .	Warner
A	Saltmarsh, G. H.	. . . .	Lakeport
C	Sanborn, Byron	. . . .	Loudon Center
A	Sanborn, Charles H.	. . . .	Hampton Falls

* Deceased.

B	Sanborn, George Henry	. . . .	Wentworth
A	Sanborn, George Hoitt	. . . .	Henniker
A	Sanborn, John H.	. . . .	Franklin Falls
B	Sanders, Henry Clay	. . . .	Claremont
B	Sanders, Loren Addison	. . . .	Concord
B	Sanders, Orren B.	. . . .	Boston, Mass.
A	Sanders, Walter Russell, Ec.	. . . .	Derry
A	Sanger, Thaddeus E., Hom.	. . . .	Littleton
C	Sargent, Elmer U.	. . . .	Penacook
A	Sargent, Frank H.	. . . .	Pittsfield
A	Sasseville, Nickolas	. . . .	Manchester
B	Sawyer, Elihu B.	. . . .	Roslindale, Mass.
A	Sawyer, Wesley	. . . .	Pelham
B	Scott, Albert Woodburn	. . . .	Groveton
A	Scott, Nathaniel Harvey	. . . .	Wolfeborough
A	Shapleigh, Edward E.	. . . .	Kittery, Me.
A	Shattuck, George Wesley	. . . .	Lisbon
B	Shaw, William Hubbard, Hom.	. . . .	Fitzwilliam Depot
A	Shea, Augustus W.	. . . .	Nashua
A	Shedd, George H.	. . . .	North Conway
A	Shedd, John Z.	. . . .	North Conway
A	Sherburne, Andrew Badger	. . . .	Portsmouth
A	Shove, George Franklin, Hom.	. . . .	Richmond
C	Shultis, Frederick Charles	. . . .	Medfield, Mass.
A	Sikorsky, Vladimir Nicholas.		
A	Simard, Emile	. . . .	Montreal, Can.
A	Smalley, Fred Lyman	. . . .	Lebanon
A	Smart, Benjamin Horace	. . . .	Washington, D. C.
A	Smith, Albert W.	. . . .	Milford
A	Smith, Arthur Noel	. . . .	Dover
A	Smith, Carlisle Onslay	. . . .	Portsmouth
A	Smith, David O.	. . . .	Hudson
A	Smith, Frank A.	. . . .	Lebanon
A	Smith, George Rufus, Hom.	. . . .	Dover
A	Smith, Henry O.	. . . .	Hudson
A	Smith, Herbert Llewellyn	. . . .	Nashua
A	Smith, Marvin F.	. . . .	Hampton

C	Smith, William Eugene	. . .	Franklin Falls
A	Smith, William Thayer	. . .	Hanover
C	Snow, Samuel Dryden.		
A	Soulard, Joseph Alfred	. . .	Salmon Falls
B	Soule, Lewis Franklin	. . .	Salem
B	Southgate, Robert Willson, Hom.	. . .	Dedham, Mass.
A	Spaulding, James Alfred	. . .	Portsmouth
A	Spaulding, Melville Cox	. . .	Ashland
C	Spear, Herman S.	. . .	Medfield, Mass.
A	Spooner, Frank, Hom.	. . .	Lancaster
A	Sprague, Edward George.		
A	Stackpole, Harry Hills	. . .	Dover
B	Staples, Hall	. . .	Grafton, Vt.
A	Staples, John Walter	. . .	Worcester, Mass.
A	Stark, Gillis	. . .	Manchester
C	Stark, Maurice Albert	. . .	Northwood Narrows
A	*Starr, Cornelius F.	. . .	Manchester
A	Stearns, Henry C.	. . .	Haverhill
A	Steuart, Frederick Charles	. . .	Manchester
A	Stevens, Charles N., Hom.	. . .	Somersworth
A	Stevens, Edwin Dearborn, Hom.	. . .	Francestown
A	Stevens, John B., Ec.	. . .	Merrill's
B	Stevens, Michel Mallett, Jr., Hom.	. . .	Lisbon
A	Stevens, Parker B.	. . .	Wolfeborough
B	Stewartstown, Charlotte Dodd	. . .	Manchester
A	St. Hiliare, Joseph Louis Emile	. . .	P. Q.
A	Stickney, Henry Ladd	. . .	Newport
A	Stillings, Ferdinand Anson	. . .	Concord
A	Stillings, Levi Chamberlain	. . .	Philadelphia, Pa.
A	Stockwell, Emmons F.	. . .	Lancaster
A	Stokes, Dudley Leavitt	. . .	Rochester
A	Stone, Melvin T.	. . .	Troy
A	Storey, John Noble	. . .	Hill
B	Story, Helen Louise	. . .	Lowell, Mass.
A	St. Pierre, Servule	. . .	Manchester
A	Straw, Amos Gale	. . .	Manchester
A	Straw, Zatae Longsdorff	. . .	Manchester

* Deceased.

A	Sturtevant, Charles B.	. . . .	Manchester
A	Sullivan, D. Edward	. . . .	Concord
A	Sullivan, James	. . . .	Manchester
A	Sullivan, Micah B.	. . . .	Dover
A	Sumner, Arthur F.	. . . .	Concord
A	Swasey, Charles E.	. . . .	Somersworth
A	Sweeney, Frederick C.	. . . .	East Jaffrey
A	Sweeney, Henry L.	. . . .	Kingston
A	Sweet, Robert V	. . . .	Rochester
A	Swett, Eddy Benjamin	. . . .	Grasmere
A	Sylvain, Emile Auguste	. . . .	Manchester
C	Tabor, Edward Orlando	. . . .	Lowell, Mass.
A	Taft, Albert Atherton	. . . .	Winchester
A	Taft, Albert H.	. . . .	Winchester
A	Taft, Edward Harvey	. . . .	Bennington
A	Talbott, Bertell Laroy	. . . .	Peterborough
B	Taylor, Herbert Leonel	. . . .	Portsmouth
A	Taylor, Joseph	. . . .	West Manchester
A	Taylor, Sullivan A.	. . . .	Gilmanton Iron Works
A	Templeton, Wilbur Fisk, Ec.		
B	Tessier, Arthur Joseph	. . . .	Nashua
A	Theriault, Joseph	. . . .	Concord
A	Theriault, Joseph Horace	. . . .	Claremont
A	Thompson, Edward Henry	. . . .	Wolfeborough
A	Thompson, Robert	. . . .	Sutton
B	Thorn, Edwin C.	. . . .	Brattleboro, Vt.
C	Thornburgh, Robert Montgomery	. . . .	Cornish
B	Thorning, William Burton.		
A	Tibbetts, James Thomas.		
A	Titcomb, George Pillsbury, Ec.	. . . .	Salisbury
A	Tobel, Frederic Von.		
A	Todd, Arthur J.	. . . .	Manchester
A	Togus, Theodore M.	. . . .	Hooksett
A	Tolles, Clarence Weston	. . . .	Claremont
A	Tolman, George Averill	. . . .	Dover
A	Towle, Fred Scates	. . . .	Portsmouth
B	Towle, George Henry, Jr.	. . . .	Newmarket

A	Towne, George Dana	. . .	Manchester
C	Toge, John E.	. . .	Acworth
A	Tremblay, Evariste Clement	. . .	Manchester
A	*Trevitt, Henry	. . .	Wilton
A	True, Walter H., Ec.	. . .	Laconia
A	*Tucker, Daniel B.	. . .	Tuftonborough
A	Tucker, Edward M.	. . .	Canaan
A	Tucker, Ira Allen, Hom.	. . .	West Milan
A	*Tufts, Charles A.	. . .	Dover
A	Tuttle, Walter, Hom.	. . .	Exeter
A	Twitchell, Walter Zeb., Hom.	. . .	Andover, Me.
A	Twombly, Edward Everett, Ec.	. . .	Colebrook
A	Twombly, John Herbert	. . .	Milton
A	Twombly, Nehemiah C.	. . .	Center Strafford
A	Underhill, George A.	. . .	Nashua
A	Underhill, George Herbert.		
A	Underwood, David Gleason	. . .	Bradford
A	Upham, Samuel Rice	. . .	Claremont
A	Vaillancour, Romeo L.		
A	Valcour, Charles S.	. . .	Nashua
B	Varick, William Remsen	. . .	Concord
A	Varney, Albert H.	. . .	Newfields
A	Verrill, Leon Gilbert	. . .	Rindge
A	Vittum, Stephen	. . .	Laconia
A	Wade, Edric Allan	. . .	Salem
A	Wadleigh, Walter Kendall	. . .	Hopkinton
A	Wakefield, George Leonard, Hom.	. . .	Manchester
A	Wakefield, Sidney S., Ec.		
A	Walker, Charles Rumford	. . .	Concord
C	Walker, Charles Sidney	. . .	Harrison, Me.
A	Wallace, Alonzo S.	. . .	Nashua
A	Wallace, Ellen Alfreda	. . .	Manchester
B	Wallace, Henry	. . .	Brooklyn, N. Y.
B	Wallace, John	. . .	Milton
A	Wallace, William F.	. . .	Plaistow
A	Ward, George C., Hom.	. . .	Sanbornton
C	Ward, Roy, Jr.	. . .	East Barrington

*Deceased.

A	Ward, Stanley M.	Hampton
A	Ward, Thomas Joseph	Tamworth
A	Warner, Franklin George	Antrim
A	Wason, Eugene	Milford
A	Waterhouse, William	Barrington
A	Watson, George Marshall	Manchester
A	Watson, Henry Porter	Manchester
A	Watson, Irving Allison	Concord
C	Watson, Maurice	Manchester
B	Watts, Harry Adelbert, Hom.	Portsmouth
A	Way, Osmon B.	Claremont
B	Wayland, Herbert Clark	Berlin
A	Weaver, Charles Albert	New Boston
B	Weaver, George Albert	Warren
A	Webster, Kimball David	Gilsum
A	Weeks, Frank Sherman	Moultonville
B	Weeks, William Rufus, Hom.	Manchester
A	Wellner, Hermann	New York
A	Wesley, John Lyman.	
C	West, Hiram B.	Suncook
A	Weymouth, George Weare	Lyme
A	Weymouth, Henry Augustus	Andover
A	Wheat, Arthur Fitts	Manchester
A	Wheatley, Hannibal P.	Farmington
A	*Wheeler, John	Pittsfield
C	Wheeler, John	Plymouth
A	Wheeler, Phineas H.	Alton
A	Wheet, Fred Eugene	Rumford Falls, Me.
A	Whitcomb, Charles Sumner Fremont	Milton Mills
C	White, Herbert Augustus	Somerville, Mass.
C	Whitmore, Albra	West Swanzey
A	Whitney, Frank E.	Rochester
A	Whittemore, Sarah Eliza	Manchester
A	Whittle, James P., Hom.	Weare
C	Wiborn, J. Auburn	New York
A	Wiggin, Henry Mayhew, Hom.	Whitefield
A	Wight, Edward M.	Gorham

A	Wilber, George Fisk	Nashua
C	Wilder, Ralph Spencer	Hanover
A	Wilder, Richard Edward	Whitefield
A	Wiley, Maurice G., Hom.	Boston, Mass.
A	Wiley, Rebecca W., Hom.	Laconia
A	Wilkins, Russell	Concord
A	Wiley, Bertram E.	Lyme
A	Willey, John Francis, Ec.	Warren
A	Williamson, W. D.	Gorham
B	Willis, John Embert	Somersworth
A	Willis, John L. M.	Eliot, Me.
C	Wilson, George Gordon Byron	Salem
C	Wims, Dennis Patrick	Uxbridge, Mass.
A	Wood, Curtis Augustine	Dublin
A	Woodbury, Frank Taylor	North Weare
A	Woodman, Milton Sawyer	West Lebanon
A	Woodward, Josiah N.	Nashua
A	Worcester, Frank D., Hom.	Keene
C	Work, Manly William	Keene
C	Worthen, Eugene Mark	Ashland
B	Worthing, Frank Bertelle	Hinsdale
A	Wright, Elam Rust	Alton
A	Wrisley, John Alson, Hom.	Lakeport
C	Yeaton, George William	Concord
A	Young, Oscar Cummings	Charlestown
A	Young, Stephen	Dover

Corrections have been made in the residences of the registered physicians, using all available data. Further information relative to changes in residence or to deceased holders of licenses will be thankfully received by the regent.

Respectfully submitted,

CHANNING FOLSOM,

Regent.

INDEX.

Appointment of superintendent, 1901.....	77
1902.....	81
Apportionment of High School fund.....	312, 313
state appropriation, 1900.....	315, 316
1901.....	316, 317
1902.....	317, 318
Approved academies.....	294
high schools.....	294
schools under law of 1901.....	294, 295, 296
Attendance.....	279
Certificates, state, resolution passed by State Teachers' Association.....	281
Certification of teachers.....	23, 280
Chalmers, Thomas, Rev.....	15
Clarke, William C., Hon.....	16
Consolidation of schools.....	278
Dame, B. F.....	280
Distribution of state appropriation, 1900.....	315, 316
1901.....	316, 317
1902.....	317, 318
Educational Council, report of.....	20
Equalization of school privileges.....	313
Examination questions:	
Algebra.....	35
American literature and composition.....	45
Arithmetic.....	38
Botany.....	71
Civics.....	58
Current topics.....	63
Drawing.....	42
Geography.....	68
Grammar.....	55
History.....	62
History of education.....	31
Music.....	73
Pedagogy.....	28
Physics.....	70
Physiology.....	65
Psychology.....	30
School law.....	34
School management.....	33
Zoölogy.....	73
Examinations, professional subjects.....	23
regulations of.....	23
scholastic requirements of.....	23

General suggestions.....	278
High School fund, apportionment of.....	312
tuition, supreme court decision.....	310
Schools.....	292
law relating to.....	292
Institute statistics.....	85-105
Institutions of a high grade.....	123-125
Klock, James E.....	14
Medical examiners, report of regent of.....	34
Normal School (see State Normal School).	
Physiologies.....	323
Physiology and hygiene.....	322
Principals of high schools and academies.....	294
Regent of medical examiners, report of.....	341
Registers.....	321
Robertson, Samuel W.....	20, 21
Salaries of teachers.....	289
School attendance.....	279
Schoolhouse at Sunapee.....	337
School officers for 1902.....	106-121
privileges, equalization of.....	313
registers.....	321
Spaulding, Fred L. V.....	16
State appropriation, distribution of, 1900.....	315
1901.....	316
1902.....	317
certificates, teachers' examination for.....	23
examinations.....	23
Grange, resolution of, regarding taxation.....	314
Normal School, calendar of.....	15
report of principal.....	12
treasurer.....	10
trustees.....	5
Teachers' Association, report of.....	16
committee on nominations.....	19
committee on resolutions.....	19
resolution of regarding taxation.....	314
<i>vs.</i> Jackson, decision of supreme court.....	329
Statistical summary by counties, 1901.....	198-201
1902.....	272-275
for state.....	276-277
tables, 1901.....	128-197
1902.....	202-271
Statistics of institutes.....	85-105
Sunapee schoolhouse.....	337
Superintendent, appointments of 1901.....	77
1902.....	81

Superintendents, list of	319
Supervision	319
Supreme court, decision of, State <i>vs.</i> Jackson	326
Union District, Concord, <i>vs.</i> Penacook District	310
Tax rate of towns for all purposes	296-302
schools	303-309
Teachers' certificates	280
Teachers, examination and certification of	22
holding state certificates	282-289
institutes	320
statistics of	85-105
salaries	289
Text-books and supplies	290
Towns, list of, giving tax rates for all purposes	296-302
schools	303-309

SEVENTEENTH REPORT

(FOURTH BIENNIAL)

OF THE

STATE BOARD OF HEALTH

OF THE

STATE OF NEW HAMPSHIRE

FOR THE

TWO YEARS ENDING NOVEMBER 1, 1902.

PRINTED BY
THE JOHN B. CLARKE COMPANY
MANCHESTER, N. H.

STATE BOARD OF HEALTH.

Gov. CHESTER B. JORDAN, Lancaster.
ATT'Y-GEN. E. G. EASTMAN, Exeter.
G. P. CONN, M. D., *President*, Concord.
CHARLES S. COLLINS, M. D., Nashua.
ROBERT FLETCHER, C. E., Hanover.
IRVING A. WATSON, M. D., *Secretary*, Concord.

STATE LABORATORY OF HYGIENE.

IRVING A. WATSON, M. D., *Director*, Concord.
H. E. BARNARD, *Chemist*, Concord.
H. N. KINGSFORD, M. D., *Bacteriologist*, Hanover.
A. K. DAY, M. D., *Bacteriologist*, Concord.

STATE OF NEW HAMPSHIRE.

OFFICE OF THE STATE BOARD OF HEALTH,

STATE HOUSE, November 1, 1902.

To His Excellency the Governor and the Honorable Council:

I have the honor to present herewith the seventeenth report of the State Board of Health.

Respectfully submitted.

Irving A. Watson

Secretary.

GENERAL REPORT.

This report is intended to comprise the leading features of the work accomplished by the State Board of Health during the past biennial period, so far as the same may be properly presented in a legislative document.

The first portion of the report, paged in Roman numerals, is little more than a synopsis of some subjects that have received more consideration and required far more labor than could be here exhibited.

The second part of the report, paged in Arabic numerals, represents more fully and completely the large amount of labor that has been expended at the State Laboratory of Hygiene, both in the chemical and the bacteriological departments. An especially complete report is given for the period on water analysis and the water supplies of cities and towns.

A report is also made upon the effort to establish the normal chlorine lines of the state; a consideration of lead poison, and other analytical investigations. A *résumé* of the bacteriological investigations in suspected cases of tuberculosis, diphtheria, typhoid fever, and malaria is also given, together with a few papers and reports upon special subjects.

In the amount of original investigations represented, this report exceeds any heretofore issued.

VITAL STATISTICS.

The general healthfulness of a state or country is determined very largely through its vital statistics, and but for such figures it would be impossible to know the result of sanitary work, or whether the average length of life were increasing or diminishing.

Fortunately we have an excellent registration system, and are, therefore, able to present statistics of a most reliable character. In the census year 1900 there were but four states in the Union whose registration of deaths was considered to be as accurate as, if not more accurate than could be obtained by the census department itself, these being New Hampshire, Massachusetts, Rhode Island, and Connecticut. In these states the returns were accepted by the government, and the usual census questions relating to mortality were withdrawn from the enumerators.

The population of New Hampshire, according to the census of 1900, was 411,588; in 1901 (calculated), 415,238.

The number of births, marriages, divorces, and deaths for the two years named is shown in the following table:

Vital Statistics for 1900 and 1901.

NEW HAMPSHIRE.	1900.	1901.	Increase.	Decrease.
Births.....	8,435	8,164	.....	271
Marriages.....	3,983	4,001	18	.....
Divorces.....	426	482	56	.....
Deaths.....	7,624	6,975	.....	649

The proportion of births, marriages, divorces, and deaths to each one thousand of the population for the two years referred to was as follows:

For the year 1900, the birth rate was 20.49; marriage rate, 9.67 (couples); divorce rate, 1.03; death rate, 18.52.

For the year 1901, the birth rate was 19.66; marriage rate, 9.63 (couples); divorce rate, 1.16; death rate, 16.79.

It will be seen that there was a marked diminution in 1901 in the number of deaths for that year from the number reported for 1900. The death rate for the year 1901 was, with the single exception of the year 1898, lower than ever before recorded.

DEATHS FROM CERTAIN SPECIFIED CAUSES.

The number of deaths from the so-called contagious and infectious diseases varies from year to year, sometimes to a marked extent, from a variety of causes, some of which appear not to be yet revealed beyond question; hence different theories regarding their prevalence are held by different writers.

The number of deaths from communicable diseases may be regarded to a great extent as indicative of the healthfulness of a locality, and of the efficiency of local health authorities in restricting and preventing this class of diseases. Many of these diseases are known to be almost completely within the control of sanitary law, while the spread of others seems to be as yet unrestrained, or only slightly controlled. There would also seem to be certain climatic influences, as yet little understood, to which may be attributed an excessive prevalence of and mortality from certain diseases, as, for instance, pneumonia, bronchitis, and influenza. It will be noted in the table that the death rate from these three diseases was much greater in 1900 than in 1901. This increased mortality from the diseases named extended over an area of the country far beyond the confines of our own state. The following table gives the mortality from this class of diseases for the years 1900 and 1901:

Deaths from Certain Specified Causes.

DISEASES.	1900	1901	Increase.	Decrease.
Pneumonia.....	942	716	.....	226
Tuberculosis (Consumption)	650	629	.....	21
Cholera infantum	462	368	.....	94
Diphtheria	64	60	.....	4
Croup.....	36	30	.....	6
Typhoid fever.....	100	89	.....	11
Influenza	183	139	.....	44
Scarlet fever.....	27	50	*23	.....
Whooping cough.	40	20	.....	20
Measles.....	19	4	.....	15
Smallpox.....	.....	5	.....	.....
Mumps.....	.....	1	.....	.....
Total.....	2,523	2,111	.....	412

* The heavy mortality of 1901 was due to an extensive epidemic of scarlet fever in the city of Keene, with 21 deaths.

In order to know the status of a given disease as a cause of death it is necessary to study its mortality for a period of years. This is equally true of given localities, and of the entire state.

The registration reports for the past eighteen years give sufficient data for that purpose—in fact, the statistics have been so tabulated that the number of deaths from any given disease may be ascertained by town, if necessary, as it sometimes is, for guidance in sanitary work.

The foregoing table shows that for the two years 1900 and 1901 pneumonia stood first as a cause of death; but in considering this subject for a series of years it will be seen that this position belongs to tuberculosis.

Inserted herewith is a diagram which vividly illustrates the relative position of the diseases named, together with the total mortality of each for eighteen years, 1884-1901, inclusive:

Deaths in New Hampshire, 1884-1901, Eighteen Years, from Certain Specified Causes.

14,101	Tuberculosis (Consumption).
11,537	Pneumonia.
6,756	Cholera Infantum.
2,940	Diphtheria and Croup.
2,309	Typhoid Fever.
1,654	Influenza (La Grippe).
583	Scarlet Fever.
550	Whooping Cough.
364	Measles.
12	Smallpox.
7	Mumps

PNEUMONIA.

Pneumonia is an acute infectious disease which for the past four years has supplanted consumption as the ranking cause of death in New Hampshire. The mortality from this disease is very large, and fluctuates very much from year to year. In 1900 the number of deaths from it in this state reached the startling figures of 942, much more than ever before recorded against this malady in a single year. In 1901 the number of deaths for which it was responsible was 716--226 less than for the previous year, but still above the average for the past eighteen years.

Pneumonia is very largely a disease of infancy and old age, the latter class being relatively very much more susceptible to it, with a proportionately large mortality. It occurs much more frequently during the colder months of the year, due probably to the fact that in the winter months the mucous membrane of the air passages is more susceptible to the invasion of the micro-organism that produces the disease. It will therefore be seen that climatic conditions are responsible not only for the large annual mortality from pneumonia, but also for the marked fluctuations in different seasons and from year to year.

The question of the prevention of pneumonia is more difficult to solve than that pertaining to some of the other communicable diseases. The aged, particularly, should guard against sudden changes in temperature, should not expose themselves to such vicissitudes as will in any way shock the system or impair its normal resisting powers.

In pneumonia the sputum should be disinfected, the mouth and throat kept clean, and the most careful precautions taken against the infection of others. Disinfection of the room after recovery or death is at least advisable, and in the event that several cases occur in the same family, complete disinfection of the premises should be performed.

CONSUMPTION (TUBERCULOSIS).

In the year 1900 six hundred and fifty deaths from pulmonary consumption were returned, and in 1901 six hundred and twenty-nine deaths from the same cause. These figures do not include other forms of tuberculosis. If the number of deaths from tubercular meningitis, hydrocephalus, tabes mesenterica, and scrofula were added, the total mortality for 1900 would be 708, and for 1901, 681.

The percentage of deaths from all forms of tuberculosis returned during the past eighteen years averages 11.26 per cent of the total mortality from all causes for that period. In 1900 it was 9.28 per cent, and in 1901, 9.76 per cent of the total mortality.

During the period referred to there was apparently a considerable

diminution in the number of deaths from tuberculosis. The annual average number of deaths from this cause from 1884 to 1901, inclusive, was 783 and a fraction.

Herewith is inserted a table showing the number of deaths from tuberculosis in its various forms from 1884 to 1901, inclusive.* The second table gives the number of deaths from tuberculosis by age periods. Its most noticeable feature is the large number of deaths in persons in the prime of life.

Mortality from Tuberculosis in New Hampshire from 1884 to 1901, inclusive.

YEARS.	Pulmonary phthisis (consumption.)	Tubercular meningitis.	Hydrocephalus.	Tabes mesenterica.	Scrofula.	Total.	Total mortality for state, all causes.	Percentages of deaths from tuberculosis to total mortality.
1884.....	868	*	27	4	26	925	6,194	14.93
1885.....	857	*	25	2	22	906	6,201	14.61
1886.....	809	19	23	11	16	878	6,426	13.66
1887.....	766	16	23	7	16	828	6,479	12.78
1888.....	742	13	30	14	21	820	6,854	11.96
1889.....	651	24	21	13	22	731	6,696	10.91
1890.....	825	30	13	6	15	889	7,368	12.07
1891.....	695	15	22	19	11	762	7,310	10.42
1892.....	736	24	16	10	17	803	7,958	10.05
1893.....	737	27	23	21	14	822	7,663	10.72
1894.....	714	22	22	21	10	789	6,898	11.43
1895.....	693	20	23	21	7	764	6,929	11.02
1896.....	679	25	21	15	15	755	6,791	11.11
1897.....	697	15	17	2	12	743	7,027	10.57
1898.....	607	24	10	7	12	660	6,743	9.78
1899.....	582	21	14	13	7	637	7,045	9.04
1900.....	650	31	10	9	8	708	7,624	9.28
1901.....	629	25	1	4	12	681	6,975	9.76
Grand total.....	12,937	351	341	209	263	14,101	125,211	11.26
Annual average.....						783+		

* Not classed separately.

The State Board of Health has, from time to time, published a large number of papers, circulars, etc., on the restriction and prevention of tuberculosis, and it realizes that this work must be continued, and that it must be supplemented by every means within the power of the state if the mortality from this disease is to be materially reduced from its present proportions.

* This, as well as the following table, was prepared by the secretary of the board for the report of the Commission on State Sanatorium for Consumptives, being herewith inserted for record purposes and for the information of those who may not have access to the report mentioned.

Deaths from Tuberculosis by Age Periods.

YEARS.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.
1884.....	50	113	218	145	93	78	64	67	21	19
1885.....	49	98	219	161	109	75	75	43	19	9
1886.....	44	87	233	152	94	67	71	37	18	6
1887.....	34	88	193	145	101	78	55	46	21	5
1888.....	48	88	219	137	71	62	55	42	15	5
1889.....	36	81	147	120	77	56	65	53	10	6
1890.....	49	77	200	156	113	65	72	63	23	7
1891.....	47	87	174	131	89	67	37	43	10	10
1892.....	28	88	178	150	84	67	71	41	20	9
1893.....	45	71	204	139	92	65	64	34	14	9
1894.....	50	70	200	150	82	59	45	45	8	5
1895.....	31	66	210	129	85	60	49	51	10	2
1896.....	41	81	180	130	85	59	49	37	9	8
1897.....	36	79	225	143	70	46	49	32	12	5
1898.....	26	53	181	143	66	52	47	22	7	10
1899.....	26	57	169	103	80	65	38	28	10	6
1900.....	36	70	193	120	76	45	61	44	1	4
1901.....	42	67	178	130	71	53	48	40	7	3
Total.....	718	1,411	3,521	2,484	1,538	1,119	1,015	768	235	128

During the period under consideration (1884-1901) there died in New Hampshire, from all causes, between the ages of twenty and thirty, 8,646 persons, of whom 3,521 succumbed to tuberculosis; or, in other words, 40.72 per cent, or 1 to 2½ decedents, were caused by tuberculosis.

Between thirty and forty years of age there were from all causes 7,916 deaths, and from tuberculosis in the same age period 2,484, a percentage of 31.38, or one to every three and a fraction deaths.

Between forty and fifty there was a total of 7,915 deaths from all causes, 1,538 of which were credited to tuberculosis, equal to 19.43 per cent, or one in every five deaths.

If we make our calculations on the entire period, twenty to fifty years, we find that 30.81 per cent, or one death in every three and a fraction, was due to tuberculosis.

INFLUENZA.

Influenza is one of the communicable diseases that has come into noticeable prominence in this country during the past ten years. The first wave of the epidemic touched this state in 1890, when thirty-three deaths were returned from it. In the following year there were one hundred and forty-three deaths, and in 1892, three hundred and thirty-one, which represents the crest of the wave. In 1893, ninety-one deaths were returned; in 1894, one hundred and twenty-one; in 1895, one hundred and twenty-one; in 1896, forty-seven; in 1897, one hundred and thirty;

in 1898, fifty-one; in 1899, one hundred and seventy; in 1900, one hundred and eighty-three,—the highest number since 1892; and in 1901, one hundred and thirty-nine.

It will be seen that as a cause of death, influenza has during the past ten years exceeded scarlet fever, typhoid fever, diphtheria, and croup.

With respect to age, the decedents from influenza are chiefly past middle life, and, like pneumonia, it is especially fatal to the aged. The same precautions should be taken against it as are to pneumonia: protection against sudden changes, care of sputum, and, as far as practicable, isolation of the patient.

DIPHTHERIA AND CROUP.

For the year 1901 there were returned sixty deaths from diphtheria and thirty from croup, the smallest number reported in the past twenty years. For the year 1900 there were reported sixty-four deaths from diphtheria and thirty-six from croup, which, with a single exception, is lower than the record for either of the preceding registration years. To what extent the work done at the State Laboratory of Hygiene in the matter of diagnosis, and the consequent early isolation of cases, and the use of antitoxin may have contributed to this result is problematical, but it is fair to assume that one of these measures has had a restrictive influence, while the other has been curative beyond question.

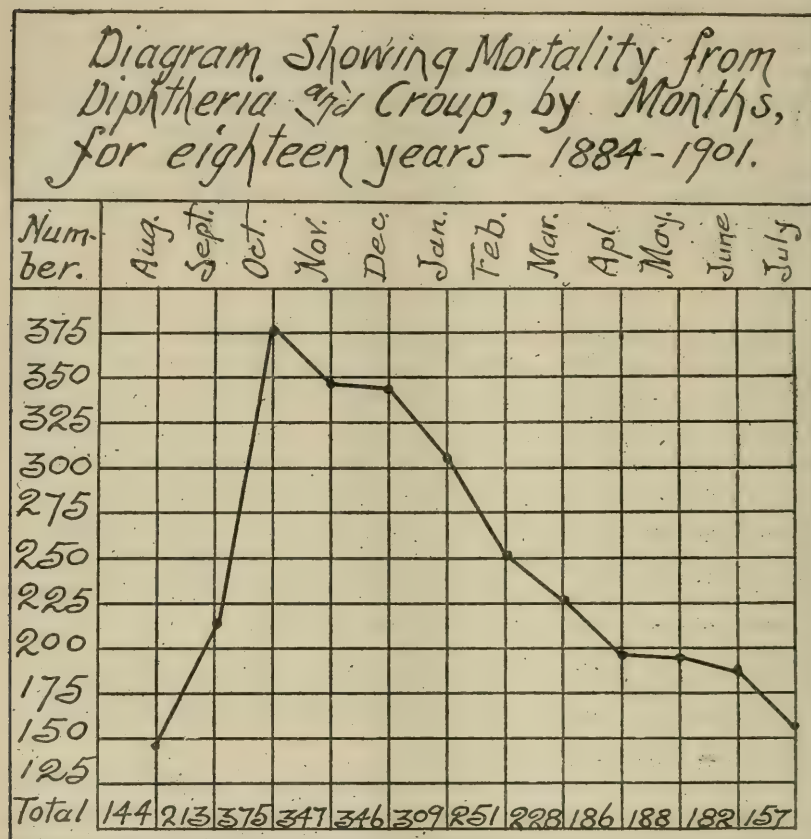
From 1884 to 1901, inclusive, there were returned to the state 2,940 deaths from diphtheria and croup. An analysis of the records shows that these are practically diseases of childhood, a great majority of the decedents being children under ten years of age.

In studying the mortality for the eighteen years referred to, we find a confirmation of a belief which we have entertained, to wit: that diphtheria prevails more extensively immediately following the opening of the schools in autumn. The diagram on next page is a graphic illustration of this assertion.

That diphtheria is frequently spread in the school-room by pupils infected but showing only slight local trouble, or none at all, is a matter of observation and record. There are many ways in which this disease may be communicated from pupil to pupil in the school-room,—indeed, while this is being written we are in receipt of a report from a city in another state giving an account of the spread of diphtheria by the common use of lead pencils, which were collected every night and distributed to the pupils in the morning without being disinfected. The use of a common drinking cup is another source of infection.

With all the sources of infection, many of which are not recognized by the people generally, it is gratifying that the mortality from diphtheria

and membranous croup has been reduced to much smaller proportions than formerly.



In August, at the end of the vacation season, diphtheria is at its lowest ebb. Schools commence in September, and the disease takes an upward start, reaching its highest point in October.

TYPHOID FEVER.

During the past twenty years the mortality from typhoid fever has only four times fallen below one hundred. In 1895 there were ninety-nine deaths from it; in 1897, ninety-two; in 1899, ninety-two; and in 1901, eighty-nine, the number for the latter year being the smallest ever reported.

The diminution in the prevalence, as well as in the mortality, of typhoid fever in recent years is attributed to improved sanitary conditions, and, more particularly, to the substitution of public water supplies from uncon-

taminated sources for the surface wells that have so often proved dangerous to families and communities. It has been remarked that the character of the water supply of a city or state could be determined, approximately, by a study of the mortality returns from typhoid fever, as this is chiefly a water-borne disease. It is conceded that the bacillus of typhoid fever is taken into the system through foods or drinks. Infected milk has in some instances been the means of spreading the disease in a given community. Occasionally it appears where its source cannot be traced. Like some other diseases, it is sometimes spread by a "walking" case, or by a person who has become convalescent but whose system still carries the germs. It is pre-eminently a disease due to unsanitary conditions, and the absence of the old-time epidemics is due to the progress that has been made in recent years in sanitation.

SCARLET FEVER.

For the year 1900 there were returned twenty-seven deaths from scarlet fever, and for 1901, fifty deaths, the latter being a larger mortality than has occurred from this disease in several years prior to 1901. The excess over the average for the past ten years was due to the extensive epidemic in Keene, which resulted in twenty-one deaths in that city. Its prevalence there was owing to the spread of the infection among the operatives of a factory, by whom it was distributed over almost the entire city—all due to the fact that the first case or cases were not reported to the board of health, and therefore were not isolated. This sad experience graphically illustrates what might have been prevented by isolation of the first case.

The largest number of deaths from this disease occurred in children between one and five years of age; the next group of greatest mortality were between five and ten years of age.

This is essentially a disease of infancy and childhood, the mortality from it after the fifteenth year being very low. There is occasionally a death from scarlet fever in an adult, but rarely. The disease is spread very largely through the mild, unrecognized cases that go about, and even attend school while in the stage of desquamation.

SMALLPOX.

In the last report of this board it was stated that smallpox made its appearance in Manchester in August, 1900, the first case in the state since April, 1895. A review was given of the outbreak which occurred from that date to the following November, it having invaded Manchester, Pittsfield, Chichester, Danbury, Hooksett, and Portsmouth.

During the two years embraced in the period from November 1, 1900, to November 1, 1902, there were reported to the State Board of Health 634 cases of smallpox, including varioloid, from thirty towns and cities in New Hampshire. The following table gives the localities, number of cases, and number of deaths reported:

Smallpox in New Hampshire from November 1, 1900, to November 1, 1902.

CITIES AND TOWNS.	Number of cases.	Number of deaths.
Alstead	1	.....
Auburn	5	.....
Bartlett	4	.....
Berlin	127	2
Bethlehem	7	.....
Concord	2	1
Exeter	1	.....
Franklin	5	.....
Goffstown	1	.....
Granatham	8	1
Hampstead	1	.....
Hancock	5	.....
Harrisville	41	.....
Hillsborough	4	.....
Hudson	4	.....
Jaffrey	1	.....
Keene	5	.....
Lisbon	12	2
Manchester	249	.....
Milford	18	*1
Nashua	76	1
Newfields	1	1
Newport	1	.....
Northfield	3	.....
Portsmouth	2	.....
Rochester	7	.....
Somersworth	17	1
Tilton	16	.....
Troy	1	1
Warren	6	.....
Whitefield	5	1
Total	636	12

* Died from pneumonia following smallpox.

During only short periods in the last two years has the state been free from smallpox. The first outbreak, and a great majority of those succeeding, was due to the importation of the disease from outside the state. It has been confined almost wholly to the French population, and has been due to a lack of vaccination. Its prevalence in this state, as well as throughout the entire country, has been largely due to the mild type of the disease, which has resulted in unrecognized cases, and in some instances in a mistaken diagnosis. In addition to this some cases have been kept from the knowledge of the health authorities until more or less persons were exposed to the infection. All this has rendered it very difficult for the health officers to suppress the disease promptly.

To meet this condition, the State Board of Health, at a meeting held December 29, 1900, adopted the following regulations, in addition to the

rules and regulations then in force, to be in effect after January 1, 1901, in such towns and cities as it might be deemed wise or necessary to promulgate the order:

REGULATION RELATING TO SMALLPOX AND OTHER ERUPTIVE DISEASES.

Whenever any eruptive disease, showing papules, pustules, vesicles, etc., or any breaking out of the skin, or any condition resembling measles, scarlet fever, chicken-pox, or smallpox, shall appear upon any person (member of a family, boarder, roomer, or visitor), the head of the family, or some member thereof, shall, within twenty-four hours after the discovery of such eruption, report each and every case to the board of health, unless said case or cases are attended by a physician.

Any person violating any of the provisions of this regulation shall be punished by a fine of ten dollars and costs for each offense, in accordance with section 1, chapter 108 of the Public Statutes.

The foregoing regulation shall be in force until otherwise ordered.

Attest:

IRVING A. WATSON,
Secretary.

The foregoing order was printed in French, as follows:

REGLEMENT RELATIF A LA PETITE VEROLE ET AUTRES MALADIES ERUPTIVES.

Toutes les fois qu'une maladie éruptive, montrant des papules, des pustules, des vésicules, etc., ou toute autre irruption de la peau ou quelque condition ressemblant à la rougeole, à la fièvre scarlatine, à la picotte volante, ou à la petite verole paraîtra sur n'importe quelle personne (membre d'une famille, pensionnaire, logeur, ou visiteur), le chef de famille, ou quelques uns de ces membres, devra dans les vingt-quatre heures après la découverte de cette irruption, reporter chaque cas et tous les cas au Conseil d'Hygiène, à moins que ce ou ces cas soient soignés par un médecin.

Toute personne violant quelque provisions de ce règlement sera puni d'une amende de dix piastres et les frais pour chaque offense, d'accord avec la section 1, chapitre 108 des Statuts Publics.

La règle ci-dessus sera en force jusqu'à ce qu'il en soit ordonné autrement.

Attesté:

IRVING A. WATSON,
Secrétaire.

Copies of this order, in English and French, in towns and cities where it was put in force, were distributed from house to house, and resulted in some instances in the prompt report of cases to the local health authorities. Some arrests were made for violation of this order and fines imposed.

In some instances it has been necessary for the State Board of Health to assist the local authorities in the suppression of smallpox by sending an inspector to the locality to work in co-operation with the local board

of health. This service has been of great assistance to the local authorities, and has been fully appreciated by them.

In some cases the lack of a well-organized health department with sufficient means and the necessary assistants to cope with an outbreak of smallpox has made it necessary for the State Board of Health to assist in the executive management of the disease, while in all the outbreaks the advice of the board, at least, has been sought.

The board has labored under considerable difficulty in securing experienced inspectors, and has been obliged to depend upon the chance of getting some health officer whose duties would admit of his leaving his own jurisdiction. A permanent inspector would have relieved the board of some annoyances and would have enabled it to offer greater and more continuous aid to local authorities.

DIFFICULTIES IN DIAGNOSIS.

In a great majority of the outbreaks of smallpox the State Board of Health has been obliged to furnish a medical expert to determine positively the nature of the disease. The fact that for many years smallpox has so rarely appeared in New Hampshire that a great majority of the practicing physicians have never seen a case, has caused them to feel unqualified to make a positive diagnosis in cases of so mild a type, especially in atypical forms of the disease. In every case where application for a medical expert has been made the board has complied with the request, although the diagnosing of disease is not one of the duties ordinarily devolving upon a state or local board of health. The exceptional and peculiar circumstances in connection with this particular disease have not only caused the board to feel justified in pursuing this course, but that it was a duty.

THE QUESTION OF VACCINATION.

The presence of so large a number of cases of smallpox in the state during the past two years, to wit, 634 cases, has emphasized in the most positive manner the value of vaccination as a protection against smallpox, inasmuch as in not one of these cases, so far as we are able to learn, was the person well vaccinated. Nearly all the cases were in persons who had never been vaccinated, although in a few instances persons who had been vaccinated many years previously and not recently re-vaccinated contracted varioloid.

Now and then a person has become infected who considered that he was protected against smallpox because the operation of vaccination had been performed, resulting in a sore due to non-aseptic conditions at the time the operation was performed, or to subsequent infection of the

wound by external means, such as the finger-nails in scratching the wound (which frequently occurs in children), soiled clothing, etc., without vaccinia.

We have frequently seen the disease in a family in which a portion of the children were vaccinated and the remainder unvaccinated, and in no instance have we known the former to contract the disease, although they were exposed under conditions most favorable for infection.

The question of vaccination does not admit of any discussion on its merits, and no reference to it would be made except for the purpose of counteracting the baseless and absurd statements that are made against vaccination by certain persons, and to assure the public that successful vaccination is the only known preventive of smallpox.

The legislature of 1901 amended section 2 of chapter 93 of the Public Statutes, relating to the vaccination of school children, so as to read as follows:

SECT. 2. No child shall attend any public, parochial, or private school unless he has been vaccinated or has had the smallpox, and this section shall be enforced by the board of health.

Every board of health in the state has been notified of the provisions of the section referred to, and asked to enforce the law to the letter. In most of the towns of the state this has been done. Some towns and cities have made provision for the free vaccination of such persons as were not able to bear the expense themselves. Such provisions may be made by boards of selectmen under the provisions of section 1, chapter 110 of the Public Statutes. In many localities certificates of vaccination are required of children entering school. A card for that purpose is furnished by the State Board of Health to physicians, upon request, as follows:

THE STATE OF NEW HAMPSHIRE.

CERTIFICATE OF VACCINATION.

This certifies that I vaccinated (whether successfully or not to be hereafter determined)on theday of190 .

.....M. D.

Examined.....190 , and found result to have been successful.

.....M. D.

This certificate shall be considered as worthless after two weeks from the date of vaccination unless the second certificate is made by some physician stating that the vaccination was successful.

The experience of health authorities throughout the entire country, in dealing with the epidemic of smallpox which has prevailed for the past two or three years, has shown that vaccination has by no means received the consideration due it as a surgical operation at the hands of many

practitioners of medicine; that special attention is not always given to the technique of the operation necessary to insure proper and successful vaccination.

At a meeting of the Conference of State and Provincial Boards of Health of North America, held at New Haven, Conn., in November, 1902, a special committee on vaccination presented the following report, which was unanimously adopted:

1. That vaccination may be defined as follows: an inoculation by scarification, puncture, or injection beneath the epidermis of a vaccine which produces, with some constitutional disturbance, the typical vaccine vesicle, which leaves, after the pock has healed, its characteristic scar.

2. That in order to obtain the most satisfactory results, vaccine must be produced either by federal, state, or provincial officials, or by private producers under the closest supervision of qualified government officials.

3. That for the greatest protection against smallpox, state and provincial laws should provide machinery whereby certified public vaccinators must be appointed for the systematic vaccination, by house to house visitation, of all children born during any year, and at public stations or otherwise of such others as circumstances may make necessary.

4. That the evidence of successful vaccination of all school children naturally forms a part of any system of public vaccination, and certificates of such should be accepted only when signed by municipal or local health officer.

5. That in order that the best results may be obtained, it is essential that medical colleges should be urged to provide for thorough instruction in the theory and practice of vaccination, and that all licensed physicians must hold certificates of having had practical instruction in the operation of vaccination in medical colleges, dispensaries, or public vaccine stations.

RECENT LEGISLATION.

The legislature of 1901 passed some enactments relating to public health matters which are herewith given.

Section 3 of chapter 110 of the Public Statutes, relating to smallpox and pestilential diseases, was amended so as to read as follows:

SECT. 3. It shall be the duty of every physician who attends upon any person infected with the smallpox, the malignant cholera, diphtheria, scarlet fever, or other malignant pestilential disease, immediately to report the same to the health officer, or, in their absence, to the selectmen of the town. If any physician shall neglect so to do, he shall be fined one hundred dollars, or be imprisoned not exceeding ninety days, or both.

To strengthen the hands of local boards of health in the prevention of some of the communicable diseases, the following was enacted:

AN ACT TO PROVIDE FOR THE RESTRICTION OF COMMUNICABLE DISEASES.

SECTION 1. A physician called upon to attend a sick person, and who finds the cause of such sickness to be of a contagious or infectious character, and

the general public likely to be endangered thereby, may quarantine such person's residence at once and report the fact to the board of health. Such quarantine shall continue in force until relieved or revoked by the board of health.

SECT. 2. Whenever any person knows or has reason to believe that any member of his family or household (boarder, roomer, or visitor) has either smallpox, diphtheria, membranous croup, scarlet fever, typhoid fever, measles, or any other malignant communicable disease, he shall, within twenty-four hours, if no physician is in attendance, give notice thereof to the local board of health of the town or city in which he resides, and such notice shall be given either verbally to one of the health officers, or by communication addressed to the board of health, and duly mailed within the time specified.

SECT. 3. The board of health, upon being notified of the existence of either of the four diseases first named in section 2, or of other malignant pestilential disease, shall immediately quarantine the infected house, premises, or rooms, so as effectually to isolate the case, and the family if necessary, in such a manner as will prevent the spread of the disease.

SECT. 4. Whenever a house, tenement, or room is placed in quarantine, a placard shall be posted in a conspicuous position, giving the name of the disease and also containing the following quarantine order: "All persons are strictly forbidden to enter or leave these premises without special permit from the board of health. All persons are strictly forbidden to remove this card without orders from the board of health."

SECT. 5. Upon the appearance of either of the diseases named in section 2 in any town or city in the state, the board of health shall make an immediate report to the State Board of Health upon blanks furnished for that purpose, and shall thereafter make a weekly report as long as the disease continues, stating number of cases, number of infected houses, fatality, and such other facts as may be required by the State Board of Health.

SECT. 6. At a proper time, after the convalescence or death of the infected person or persons, the board of health shall cause the infected premises to be thoroughly disinfected and cleansed, so as effectually to destroy all contagion, said work to be carried out according to methods indorsed and recommended by the State Board of Health, after which the said premises may be released from quarantine.

SECT. 7. No parent, guardian, person, or persons having the custody of any child shall permit such child, if infected with any communicable disease, or has been exposed to such, to attend any public or private school.

SECT. 8. It shall be the duty of a health officer, or a representative of a local board of health, to attend a meeting of a State Board of Health, when requested by the latter, for consultation in the restriction and prevention of contagious and infectious diseases, or for the consideration of other important sanitary matters.

SECT. 9. Any person who knowingly violates any provision of this chapter, or any regulation established by authority of this chapter, shall be punished by a fine of ten dollars for each offense.

SECT. 10. All acts and parts of acts inconsistent with this act are hereby repealed, and this act shall take effect upon its passage.

[Approved February 20, 1901.]

The above act has been printed upon all placards used by local boards of health in quarantining premises infected with diphtheria, membranous croup, scarlet fever, etc. The chief features of the measure are:

First. A physician may establish a quarantine.

Second. Families are obliged to report certain communicable diseases if no physician is in attendance.

Third. Local boards of health shall make weekly reports to the State Board of Health.

Fourth. Disinfection shall be performed by local boards of health.

Fifth. No child infected with any communicable disease shall be allowed to attend school.

Legislation relating to the adulteration of milk, legal standards, etc., is embraced in the following two sections from an act in amendment of chapter 107 of the Public Statutes, 1901:

AN ACT IN AMENDMENT OF CHAPTER 127 OF THE PUBLIC STATUTES, RELATING
TO THE INSPECTION OF MILK. . . .

SECT. 17. If any person shall adulterate milk, skim-milk, or cream with water or otherwise to be sold, or shall sell or offer for sale, or have in possession with intent to sell, any adulterated or unwholesome milk, skim-milk, or cream, containing any coloring matter or preservative, or any milk produced from sick or diseased cows, or cows fed upon the refuse of breweries or distilleries, or any other substance which may be deleterious to the quality of milk, skim-milk, or cream, or shall sell, or offer for sale, or have in possession with intent to sell as pure milk, any milk from which the cream or a part thereof has been removed, he shall be fined not more than two hundred dollars, or imprisoned not more than sixty days, or both. And it shall be the duty of boards of health and milk inspectors to file the necessary information with the chief of police of the city or town or the county solicitor of the county in which such city or town may be situated, and it shall be the duty of such chief of police and county solicitor to prosecute offenders under this act to final judgment and sentence.

SECT. 18. In all proceedings under this chapter, if the milk is shown, upon analysis, to contain less than 13 per cent of milk solids, or to contain less than $9\frac{1}{2}$ per cent of milk solids exclusive of fat, or to contain less than $3\frac{1}{2}$ per cent of fat it shall be considered evidence of adulteration except during the months of April, May, June, July, August, and September, when milk containing less than 12 per cent of milk solids, or less than 3 per cent of fat, shall be considered evidence of adulteration, or if, in the case of skim-milk, it shall contain more than 91 per cent of water and less than 9 per cent of milk solids exclusive of fat, it shall be considered evidence of adulteration.

The law relating to the sale of poisons was amended so as to restrict the amount of arsenic that may be legally used in the manufacture of certain fabrics, as follows:

AN ACT IN AMENDMENT OF CHAPTER 269 OF THE PUBLIC STATUTES, RELATING
TO THE SALE OF POISONS.

SECTION 1. Chapter 269 of the Public Statutes is hereby amended by adding thereto another section, as follows:

"SECT. 16. Any corporation, person, firm, or agent who shall sell or offer for sale or exchange any woven fabric or paper containing arsenic in any form, or any article of dress or of household use composed wholly or in part of such woven fabric or paper, or any article of dress containing arsenic, shall, upon conviction thereof, be fined not exceeding one hundred dollars; *provided, however,* that this section shall not apply to dress goods or articles of dress containing not more than ~~one~~ one-hundredth grain, nor to other material containing not more than one tenth grain of arsenic per square yard of the material."

In the matter of the protection of public water supplies, special legislation has been enacted from time to time to prevent the pollution of certain brooks, rivers, and ponds by manufacturing industries, sawmills, etc. The last legislature extended such protection to Ammonoosuc river, so far as wood-working establishments are concerned, in the following act:

AN ACT TO PROTECT THE AMMONOOSUC RIVER IN CARROLL, BETHLEHEM, LITTLETON, LISBON, AND BATH, AND ITS TRIBUTARIES, FROM POLLUTION BY SAWDUST AND OTHER WASTE.

SECTION 1. No person or corporation shall put or place, or cause or allow to be put or placed, any sawdust, shavings, edgings, chips, bark, or other waste, from wood-work establishments, into Ammonoosuc river, or its tributaries, in the towns of Carroll, Bethlehem, Littleton, Franconia, Lisbon, and Bath. Any person or corporation violating the provisions of this act shall be punished by a fine of not exceeding one hundred dollars for each offense.

SECT. 2. This act shall take effect August 1, 1904.

STATE LABORATORY OF HYGIENE.

The most important measure passed by the legislature of 1901, relating to public health interests of the state, was that creating a state laboratory of hygiene. Evidence of the truth of this assertion may be found elsewhere in this report, in a review of the extensive work done in the examination of public and private water supplies, the inspection and examination of food products, the bacteriological examinations in the investigation of suspected cases of tuberculosis, diphtheria, typhoid fever, malaria, besides work of a lesser magnitude not covered by the report.

We can certainly point with pride to what has been accomplished along these lines in the short time in which the laboratory has had an existence, and we believe it to be an invaluable adjunct to the public health service of the state, the results of its work being much more far-reaching than can

be exhibited in any report, and that it is an institution that merits and will receive at the hands of the legislature all the aid necessary for its support.

Owing to the great demand upon the laboratory for the analysis of suspected water supplies, it has not been possible to prosecute so active a work in the examination of food supplies, drugs, dairy products, etc., as was desirable, or as is contemplated in the near future. Work in the line of water analysis, particularly of those public supplies already examined, will probably not be so great in future, and therefore much more time will be given to the investigation of adulterated food supplies, drugs, dairy products, etc., as is authorized and provided for in chapter 269 of the Public Statutes.

The law creating a state laboratory of hygiene may be found on page 149 of this volume, in connection with a somewhat extensive report of the work accomplished.

LOCAL BOARDS OF HEALTH.

As we have had occasion to remark in former reports, the law enacted a few years ago, making local boards of health practically continuous, in that only one new member is appointed each year, has resulted in making these organizations much more efficient than formerly, and, furthermore, each year seems to show an added executive capability in their work.

We have in the state today many excellent boards of health, posted as to their duties and taking an interest in their work. We have seen this well exemplified in many of the smallpox outbreaks, as well as on other occasions.

It is true, however, that there is occasionally (very rarely) a board composed of men apparently unsuited for the work, whose performance of their duties is perfunctory, and whose knowledge of the obligations and functions of a board of health is comparatively limited.

Formerly it was quite generally the practice for local boards of health to issue a long set of rules and regulations which, when approved by the board of selectmen of the town, recorded, and posted, were supposed to be equivalent to law. While many of these regulations were good, some were absurd and in direct violation of existing law, yet if they could not be legally enforced they were at least of a limited educational value to the community. In more recent years laws to regulate most of the ordinary conditions in themselves nuisances, or likely to become so, have been enacted, so that it has become practically unnecessary for local boards of health to issue rules and regulations.

Moreover, authority has been given the State Board of Health to make such rules and regulations for the protection of public health as it may

deem necessary, hence local boards rely upon the state board to issue such regulations as may be necessary to meet local exigencies not directly specified in chapter 108 of the Public Statutes.

Again, local boards of health feel at liberty to, and do most frequently, consult the state board in special cases and act upon the advice given.

It is by a combination of these conditions and an apparently increased interest on the part of health officers that much more efficient sanitary work is now being accomplished than was possible only a few years since.

SCHOOL OF INSTRUCTION FOR HEALTH OFFICERS AND SANITARY CONFERENCE.

The State Board of Health, in connection with the New Hampshire Association of Boards of Health, held a "school of instruction" for health officers at the state house April 29, 30, and May 1, 1902. The program for the meeting was arranged by the State Board of Health, and consisted of eight sessions, at which valuable papers relating to public health work were read, followed by discussions of the subject.

The following papers were presented:

"Smallpox Quarantine," by George Cook, M. D., inspector State Board of Health.

"Practical Disinfection," by Lemuel Pope, Jr., D. V. M., president board of health, Portsmouth.

"Disinfection and Disinfectants," by C. E. Congdon, M. D., president board of health, Nashua.

"Quarantine and Disinfection in Contagious Diseases," by Mr. William B. Blake, inspector board of health, Manchester.

"Practical Disinfection," by Mr. Charles E. Palmer, health officer, Concord.

"How Can We Best Protect the Public from Consumption?" by Daniel S. Adams, M. D., president New Hampshire Medical Society, Manchester.

"Sanatoria and Hospitals for Consumptives," by H. T. Fontaine, M. D., Concord.

"The Contagiousness of Tuberculosis," by C. A. Weaver, M. D., chairman board of health, New Boston.

"The Struggle against Consumption," by Edward O. Otis, M. D., Boston, Mass.

"Difficulties that Confront a Country Board of Health, with Suggestions regarding Same," by Mr. G. F. Lowe, secretary board of health, New Ipswich.

"The Model Health Officer and His Duties," by D. M. Currier, M. D., president New Hampshire Association of Boards of Health, Newport.

Discussion.

"Powers of Boards of Health, Statutory and Otherwise," by John C. Bickford, Esq., president board of health, Manchester.

"A Septic Tank Designed for a Small Village," by E. H. Hunter, C. E., chief assistant to Dartmouth College engineer, Hanover.

Discussion.

"Construction of Village Sewers," by Robert Fletcher, Ph. D., director of Thayer School of Civil Engineering, Dartmouth College, associate American Society Civil Engineers, member New Hampshire State Board of Health.

"The Inspection and Control of Foods and Drugs with Reference to Their Adulteration," by Albert E. Leach, S. B., analyst to the Massachusetts State Board of Health, Boston.

"A Study of New Hampshire Water Supplies," by H. E. Barnard, B. S., chemist New Hampshire Laboratory of Hygiene, Concord.

Discussion.

"Some Data concerning the Proposed Chlorine Map of New Hampshire," by same author.

"Lead Poisoning as Related to Water Supplies," by H. E. Barnard, B. S., chemist New Hampshire State Laboratory of Hygiene.

Discussion.

"Milk Inspection," by Mr. William K. Robbins, chemist and clerk board of health, Manchester.

"Local Boards of Health and the Law," by Irving A. Watson, M. D., secretary State Board of Health, Concord.

"Diphtheria and the Klebs-Loeffler Bacillus," by D. E. Sullivan, M. D., Concord.

Discussion.

"The Bacteriology of Our Most Common Diseases," by Prof. H. N. Kingsford, M. D., bacteriologist State Laboratory of Hygiene, Dartmouth Medical College, Hanover.

"Some Bacteriological Methods of Interest to Boards of Health," by Arthur K. Day, M. D., bacteriologist State Laboratory of Hygiene, Concord.

This meeting was attended by representatives of the boards of health in over one hundred fifty towns of the state, including some of the smallest and most remote municipalities. It was admitted by all that this meeting was a source of a great deal of information to most of the health officers present, and that it would result in better work and methods in their own particular localities. That this is true has already been evidenced in numerous instances. We believe that an annual "school of instruction" of this kind would be of great value to the sanitary interests of the state.

THE SANITARY BULLETIN.

The Sanitary Bulletin has been published quarterly during the past two years, and is a direct means of announcing rules and regulations issued from time to time by the State Board of Health, giving information concerning the law covering special conditions, the duties of local boards of health in certain cases, papers on the restriction and prevention of disease, and many things of sanitary interest to the public generally. The Bulletin has been the means of diffusing a great deal of information in its particular line among the people of the state, and many expressions of commendation have been received for it. It will also be used as a means of informing the public of the work done from time to time in the State Laboratory of Hygiene, and particularly will it devote some consideration in the future to the question of adulterated foods, drugs, etc., as well as to some advertised preparations which, if not dangerous to the public health or misrepresented as to quality, are commercial frauds, to say the least. As stated elsewhere, a large amount of work devoted to the investigation of the water supplies of the state during the past two years has made it impossible to take up the food question as we would have done; but this subject will be given much more attention and investigation in the near future than it has ever before received in this state, and the Bulletin will be the means of communicating the results to the public.

REGISTRATION OF VITAL STATISTICS.

The board has charge of the registration of births, marriages, divorces, and deaths for the state, and makes a biennial report, mostly of a statistical nature, on the results obtained by the tabulation of these returns.

The report for the years 1900 and 1901, issued almost simultaneously with this report, consists of a volume of a little more than four hundred pages. This work does not possess much interest to the public generally, but is of incalculable value as a matter of record, and for the sanitary guidance of health authorities in showing the general prevalence of disease and the mortality of every town and city in the state, thereby becoming an index of the results of public health work, as well as pointing out localities where special work may be necessary to restrict a disease where the mortality is in excess of the general average.

In this work practically Dr. Farr's system of the classification of the causes of death is used, as it has been for many years. It has, however, become antiquated by reason of medical and sanitary advancement, and will not hereafter be used in the New Hampshire Registration Reports. The Bertillon classification, otherwise known as the "International Classification of the Causes of Death," which has been adopted by all the

Americas and a large part of Europe, will be used. It is the same classification as was used by the United States Census in its last statistical compilation of the causes of mortality.

THE COMMISSION ON STATE SANATORIUM FOR CONSUMPTIVES.

The commission appointed by the governor, under an act of the last legislature, to consider the feasibility of establishing a state sanatorium for consumptives have not been idle, and they will present a report which will be likely to carry conviction to the minds of all who will study it from an unprejudiced standpoint.

The mortality resulting from tuberculosis in the state of New Hampshire will be shown for a period embracing the last twenty years; the number of deaths yearly chargeable to it; the age periods most largely affected; the nature of the disease itself; its curability; the results that have been attained in various sanatoria; and many other facts necessary in order to arrive at a correct conclusion.

The commission visited and carefully examined into the details of several sanatoria established for the cure of this disease. They believe that if the legislature and the public could visit these institutions all skepticism as to their value and the results accomplished would be irresistibly swept aside, and that such interest would be awakened that ample provision would willingly be made for a sanatorium in this state.

At the Massachusetts Sanatorium, at Rutland, the commission found, upon the day of their inspection, 246 patients, nearly all of whom presented an appearance of good health, with faces reddened and bronzed by constant exposure to fresh air, sunlight, and winds. Their demeanor was cheerful and happy. To cap the climax of deception, the commission witnessed a game of baseball which would have done credit to a professional team, while there was an enthusiastic audience of some two hundred persons,—yet every one of them was a consumptive.

Some of them were already recovered and were ready to be discharged, while the great majority were well along on the road to restored health.

A few years ago no one would have believed such results possible, and today, even, they seem incredible to many,—yet the facts are apparent year in and year out to those who visit these institutions.

The commission also visited the Adirondack Cottage Sanitarium, an institution begun nineteen years ago with a single small, unpretentious cottage costing eight hundred dollars, but now comprising many buildings and more than half a million dollars invested,—and all this in the name of charity, through the splendid and unselfish efforts of Dr. Edward D. Trudeau.

There the same results were apparent as were found at the Massachu-

setts institution. The annual reports show that from 50 to 70 per cent of the patients who have been there for treatment have been returned to their homes restored to health and usefulness. Nor are these the figures of temporary results, for the institution, year after year, keeps in touch with its "graduates," in order that the ultimate results of the treatment may be definitely known.

At Sharon, Mass., is another sanatorium for the treatment of consumptive females; another great work for charity's sake, established and maintained largely through the efforts of Dr. Vincent Y. Bowditch of Boston, who is recognized as an authority on this subject by the medical profession.

At that institution were found girls from the factory, clerks, school teachers, in fact young women from the various walks of life, most of whom were being rapidly restored to health. The curative results at this institution, covering its eleven years of existence, are on a par with those already mentioned.

The remarkable results obtained at these institutions place the sanatorium treatment of consumption far in advance of any other method. Indeed, in a great majority of cases it probably offers the only path to recovery.

All these facts are now matters of record. The method of treatment has been demonstrated through years of experience in this country and abroad, and it is believed that the time has come when the state should make some suitable provision whereby may be saved the lives of many who, without such opportunity for treatment, are doomed to an early death.

COMMISSIONERS OF LUNACY.

The State Board of Health constitutes the State Board of Commissioners of Lunacy. The ninth report of that board, for the two years ending September 30, 1902, shows that there were, on October 1 of the present year, at the New Hampshire State Hospital and the several county almshouse institutions, 736 insane persons,—a slight decrease during the last three years.

Of the number committed to the New Hampshire State Hospital for remedial treatment by order of the board, for the two years ending September 30, 1902, 34.92 per cent have been discharged cured; 13.49 per cent, improved; 8.73 per cent, unimproved; 5.55 per cent, deceased; while the remainder are still receiving treatment.

The law was put in operation in 1889, since which time 704 persons have received treatment by order of the board.

On the subject of the criminal insane, the report says:

"The practice of committing insane criminals to the New Hampshire State Hospital, to be placed in buildings and wards occupied by other patients, is a procedure which we believe to be wrong from every point of view, and we would urge upon the legislature some action to remedy this evil. A separate building, at least, should be provided for such insane persons as have committed homicide or other serious crimes, and such building should be safeguarded against the escape of its inmates. At the present time, under the administration of existing laws, this cannot be done, and it is not an unknown occurrence for a patient who has committed murder to escape from the New Hampshire State Hospital. This institution was not designed for the reception of criminals. To obtain the best possible results it is necessary that the insane shall have the greatest possible liberty consistent with safety to themselves and others, and in no sense is the State Hospital a proper place for the incarceration of criminals."

SPECIAL REPORTS.

In the following pages will be found reports on the "Examination of Water Supplies," "Water Supplies of Cities and Towns," "State Laboratory of Hygiene," and "Miscellaneous Papers." Numerous sub-topics are taken up under the several heads, particularly under the last topic mentioned.

Several papers relating to specific diseases and causes of diseases are given following the special report on the laboratory work. These are so complete in themselves that a summary is unnecessary.

Reference to all of the more prominent matters contained in this report may be found in the Index.

EXAMINATION OF WATER SUPPLIES.

EXAMINATION OF WATER SUPPLIES.

Prior to the establishment of the Laboratory of Hygiene, no systematic examination of the public and private water supplies of the state had ever been attempted. It was the custom of the State Board of Health to have samples from suspected supplies analyzed by private chemists whenever it was deemed necessary, but no special attention could be given to the work; however, some of the results so obtained were published by the board from time to time. There had also been considerable work accomplished by private owners in the way of examination and analyses of projected supplies, and in cases where an outbreak of sickness suggested an impure water. The State Experiment Station had made water analyses for some years past, and reached gratifying results in the examination of the supplies of several of our larger cities. These examinations, together with suggestions and explanations concerning the work, are in part incorporated in Bulletin No. 53, entitled, "The Farm Water Supply." With the establishment of the Laboratory of Hygiene, under the management of the State Board of Health, opportunity was afforded for taking up the much-needed work in a systematic way. The results of the investigations since the opening of the laboratory are included in this report.

Since it was evident that the public supplies were furnishing acceptable water, attention has been given chiefly to the examination of private supplies suspected of causing illness and so located as to be liable to pollution. For the collection of these samples we are indebted to the physicians of the state and to the local boards of health, who have not only collected and shipped us samples, but at our suggestion closed many supplies which were shown to be unfit for drinking.

The water supplies of our state can be variously classified, but for our present purpose it is most convenient to discuss them under the heads of spring, well, and surface waters. In the class of spring waters we include those supplies which flow continuously or intermittently from the ground, or from fissured rock; well waters are those which are reached by an excavation either by digging or boring a cylindrical hole into the subsoil or stratum underlying the surface of the ground, the interstices of which are filled with water; surface waters include rivers, ponds, and lakes, either natural water courses which carry away the accumulated

rainfall or basins which store the water that drains from the surrounding watershed.

Spring waters have always been held in high repute as sources of domestic supply, and justly so, for springs as a rule yield water of a high degree of organic purity. Their water is derived from the rain which, falling upon the ground in a relatively pure condition, passes readily into the pervious soil. Soaking slowly through the soil, it reaches an impervious stratum along which it may flow for miles, losing by oxidation and filtration whatever organic matter it may have accumulated before it passed into the soil, and finally emerging at some rock fissure or gravel bed, clear and sweet, and as nearly pure water as nature furnishes. The amount of water yielded by springs depends upon the amount of rainfall absorbed by the collecting surface, and is therefore proportional to the area of such surfaces. The character of the water depends upon the nature of the materials with which it comes in contact in its underground flow. If, for example, it passes through beds of gypsum, it will contain much sulfate of lime; if over beds of iron ore, it will be chalybeate in nature. In a word, its mineral characteristics will be that of the stratum through which it passes. The granitic character of our soil and the varied topography of our landscapes insure us abundant springs, flowing pure and acceptable water.

Springs can often be utilized in supplying families and small communities with water. When it is not possible to convey the supply by gravity, the flow is frequently sufficient to work a ram, turbine, or other form of pumping engine.

The wide and favorable reputation of New Hampshire water is due to the unexcelled character and large number of spring supplies. Removed as they usually are from all danger of contamination, they furnish us thousands of supplies of unrivaled purity. Unfortunately, the natural character of the water is frequently influenced by the kind of pipe through which it is conveyed. The customary use of lead pipe for this purpose in many cases changes a pure and wholesome water to one charged with insidious poison which slowly, but none the less surely, undermines the health of the consumer. The subject of lead poisoning is treated at length in another article.

Our surface waters are also very generally pure. The waters of our three large lakes, Winnepesaukee, Sunapee, and Newfound, are as pure as any in the world. Their watersheds are so sparsely populated, and their tributaries so free from the waste of manufacturing operations, that they are magnificent natural reservoirs capable of furnishing the supply of a metropolis. Brook, pond, and river waters are generally rain waters which collect from the surface of a natural watershed, but the

character of the water as it falls in rain is much modified when it reaches its ultimate goal in pond or river. In its flow over the surface of the ground, down steep hillsides, through forests, over beds of accumulated peat, over cultivated fields and rocky wastes, it has been busy extracting material of all kinds: organic matter from the dead leaves of the forests, coloring matter from the peat and grasses of the lowlands, waste matter from the cultivated fields, mineral constituents from the rocks. As it flows on it receives the overflow of springs, drainage from inhabited areas, surface wash from pastures, sawdust and other waste matter from manufactories.

Because of their secluded location, the cleanliness of their watersheds, and the unlimited amount of water they provide, ponds and streams are usually looked to as sources of water supplies by our cities and large towns. Their water is soft and well aerated, but apt to be flat from the small amount of carbonic acid it contains. The water of ponds is also liable to be affected by the growth of fresh-water sponges and the class of plants called algæ. The former by their decay may give the water a disagreeable appearance and odor, but this is not proved injurious to health. The latter are so fine that they cannot be distinguished in a glass of water, but in larger quantities they impart a greenish hue, and the use of water so affected may cause intestinal disturbances.

As a rule, the rivers used as supplies in New Hampshire are free from sewage and so are not considered as liable to cause diseases among users of the waters. But it is a fact that in several instances our towns are using water from streams which receive sewage in greater or less quantities in the course of their flow. It has long been thought that running water would purify itself; that any sewage flowing into a river would be destroyed by oxidation in the course of twenty miles' flow, and chemical analyses have tended to support this assertion. For instance, the river Seine, which receives the sewage of Paris, becomes, fifty-five miles below the city, almost as pure as it was before the entrance of the sewage. Several factors are concerned in this apparent purification. Oxidation does occur to some extent. The experiments of the English Rivers Commission indicate that in flowing twenty miles from 20 to 30 per cent of sewage might, in summer, be destroyed by oxidation. Then precipitation is constantly going on, and suspended matter is rapidly removed by this means. But most of the apparent purification of running streams results from the great dilution of the sewage by the constant increase in the volume of a river, from both tributary streams and inflowing ground water. In this way the poisonous matters may be so diluted that they are beyond the power of chemical analysis to detect. Yet should the germs of disease have been present they are

still there, and as powerful for evil as ever. Dr. Frankland, a high authority on this subject, says: "There is no process practicable on a large scale by which sewage can be removed from water once so contaminated, and therefore I am of the opinion that water which has once been contaminated by sewage is thenceforth unsuitable for domestic use."

"If a stream has received much filth in its course, its waters should be considered objectionable, and to be avoided for human use, unless, indeed, the volume should be so great compared with the filth pollution as to be practically independent of such reasoning. If sewage contains the germs of disease, whatever they may be, no agent at present known, except a sufficiently high temperature, will efficiently destroy them." (Mass. S. B. H. Report, Vol. VIII, page 283.)

It is altogether feasible to provide against the direct contamination of water supplies from sewage by requiring all communities to treat their sewage in such manner that the effluents shall conform to a given standard of hygiene before it is permitted to go into our water courses, lakes, and ponds. From a moral standpoint they should feel obliged to render innocuous their sewage before allowing it to escape into the streams which furnish water supplies for their neighbors down the stream. The time is not far distant when legislation will compel such action and insure the continued purity of our water courses. Now that the effectiveness of the septic tank treatment has been demonstrated, no new sewage system should be introduced in the state without providing for septic treatment of the sewage, and as rapidly as possible the existing systems should be improved to conform to modern ideas.

While our villages and cities rely on surface water supplies, the great majority of our agricultural population, comprising more than 35 per cent of the inhabitants of the state, are dependent on the well for a water supply. A well, whether bored, dug, or driven, is simply a cylindrical shaft extending down into the subsoil or stratum underlying the surface. When a pervious subsoil of sand, gravel, or limestone overlies an impervious material, such as clay or granite, a portion of every rainfall enters the subsoil and, being held up by the impervious layer below, tends to accumulate. The water thus held in the interstices of the rocks lying immediately beneath the soil is "subsoil" or "ground" water, and constitutes about 40 per cent of the soil which it occupies. Its surface is not level but slopes towards its natural drainage outlet, from two to eight feet to the mile. The water thus forms a subterranean river, always flowing in one direction. A well penetrating the stratum through which this river flows is filled by the water to the same height that it occupies in the soil. If the water in the well is wholly undisturbed there will be a constant but imperceptible current in it in the direction of the

flow of the ground water, and there will be no flow into the well save in one direction. But if the well is freely drawn upon so the level of the water is below that of the water in the surrounding earth, inflow will take place from all directions. This inflow is liable to take place from a distance of one hundred feet laterally, and from a much greater distance in the direction from which the ground water flows. Hence we may accept it as a fact that filth within one hundred feet of a well will influence the character of the water. But this is not the whole truth, for the original source of filth may be much further away and have gradually defiled the soil in the direction of the well until it extended within its influence. Cesspool filth has been known to permeate through the soil for a distance of two hundred yards and poison wells.

It is wholly probable that there are 50,000 wells now in use in this state, and that 150,000 people are dependent upon them for their water supply. It is doubtless true that at one time nearly every one of these wells furnished an acceptable supply for drinking and domestic purposes. Such, however, is not the case today.

In early times little regard was given to hygienic laws, and the well was located as near the kitchen and barnyard as water could be found. The slight amount of filth which was spread upon the ground in the vicinity of the well was not sufficient to materially affect the quality of the water at first, and the fame of the pure supply was one of the legacies handed down to later generations. The well may still be used, its water may be clear and sparkling and the fame of its purity possess the minds of users of the supply; and yet the sewage of years has been poured upon the ground about the well until the water is but a pool of filth, reeking with corruption and disease.

As an example of the disease-producing properties of a bad well water, the following instance is cited: In September, 1901, a convention was held in a hall in Jaffrey and dinner was served to those in attendance. About two weeks after the convention cases of typhoid fever began to develop among those who were there. Eleven cases in all were reported, with one death. Investigation showed that the water used at the dinner was of very bad quality, and after a searching examination was held to be the cause of the epidemic. The results of the examination of the supplies which furnished the water are given under Nos. 206, 207, and 208.

In a small rural village the supply of water from wells may have been of unexceptionable quality for an indefinite time, but the place grows, population becomes more dense, the ground water is drawn upon in excess of the supply, the drainage area of the well is increased, and the water becomes less pure both from this cause and from the increased amount of sewage returned to the soil, which is sure to become saturated beyond

its power of oxidation, and pollution of wells is inevitable. Wells should be abandoned as a source of water supply for household use whenever there are more than two houses to an acre of land.


Fortunately for the health of the community, the introduction of water systems has caused many of our town and most of our city wells to be filled up. Many city wells have been examined at the State Laboratory of Hygiene, and in almost every case found grossly polluted. A few years ago the city of Brooklyn caused the water from private wells within the city limits to be examined, and of the 655 supplies but seven were found to be suitable for drinking. It is unfortunate that many men guard the honor of their water supply as sacredly as the honor of their name, and refuse to believe that a water that has been used for generations can be otherwise than pure. However praiseworthy this attitude may seem it is wholly wrong, and the time will come when sickness will teach what sanitary science has failed to do.

During the past year we have examined the water from over 800 supplies. Generally the samples have been sent us after correspondence concerning them, and in receptacles furnished by the laboratory. In some few instances, however, we have received samples in jugs and bottles of all kinds, and in such condition that an analysis of any value whatever was impossible.

From the results obtained since the establishment of the laboratory, we have prepared the following tables and diagrams, which show most clearly the general character of our waters:

Diagram No. 1.—Showing total number of water supplies examined, and the sources from which they were derived.


814. Total number of supplies examined.




524. Well supplies.



172. Spring supplies.



81. Pond supplies.



50. Stream supplies.




Diagram No. 2.—Showing results of examinations of water supplies.

814. Total number of supplies examined.

401. Good.

321. Bad.

92. Doubtful.

413. Bad and doubtful considered in one class.

Diagram No. 3.—Showing results of examinations of well supplies.

524. Total number of well supplies examined.

180. Good.

265. Bad.

79. Doubtful.

Diagram No. 4.—Showing results of examinations of spring supplies.

172. Total number of spring supplies examined.

103. Good.

45. Bad.

24. Doubtful.

148. Total number of good supplies, ignoring the presence of lead.

Diagram No. 5.—Showing results of examinations of pond supplies.

81. Total number of pond supplies examined.

68. Good.

7. Bad.

6. Doubtful.

Diagram No. 6.—Showing results of examinations of stream supplies.

50. Total number of stream supplies examined.

45. Good.

3. Bad.

2. Doubtful.

Of the waters from the 814 supplies examined, 401, or 49.2 per cent, were of such quality as to be above suspicion, and were reported as good; 321, or 39.4 per cent were without doubt polluted and unfit to drink; and 92, or 11.4 per cent, were neither good enough to be included in the first class, nor polluted to such an extent as to make them wholly unfit for use. This last class, which we will call doubtful, includes waters that have received pollution in the past but at present are not being contaminated, or, if so, by only small quantities of filtered sewage.

To make the comparison more clearly seen, and since sooner or later the doubtful waters will become polluted, let us consider but two classes of water, good and bad. Then of the 814 waters we find 401, or 49.2 per cent, good, and 413, or 50.8 per cent, bad.

We have made another classification based on the sources of these waters, and considered them as surface, spring, well, and cistern waters; and since the surface waters received, were of two classes we have further subdivided this source into pond and stream waters. Eighty-one pond waters were examined and 68, or 84 per cent, were found to be potable, or, in other words, of good quality for drinking purposes; 7, or 9 per cent, were bad; and 6, or 7 per cent, were doubtful. It is true that several of the waters classed as good contained an excess of vegetable matter during a portion of the summer, but this condition is only temporary, and usually produces no ill effect. Of the 7 waters classed as bad, three were so placed because they contained lead which was dissolved from the lead service pipes.

Of 50 stream supplies, 45, or 90 per cent, were of good quality; 3, or 6 per cent, were doubtful; and 2, or 4 per cent, were bad.

Of 172 spring sources, 103, or 60 per cent, were good; 45, or 26.5 per cent, bad; and 24, or 13.5 per cent, doubtful. These figures hardly express the sanitary condition of our springs, for 34 of the 45 bad supplies, and 11 of the 24 doubtful waters were naturally very pure, but contained lead in considerable quantities, and were necessarily reported as bad. If we ignore the effect of the lead, or, better, consider the condition of the water at its source, we find that of the 172 spring waters examined, 148, or 86 per cent, were potable.

Seven cistern supplies were examined and 5, or 71 per cent, were found to be good, although in several instances having a marked odor and disagreeable taste. Two, or 29 per cent, were bad.

But it is the well supplies that are of greatest importance, and the figures obtained are almost startling as we realize their significance. Of 524 well supplies examined, but 180, or 34.3 per cent, were good; 265, or 50.7 per cent, were bad; and 79, or 15 per cent, were doubtful. Or considering the doubtful and bad in one class, we find 65.7 per cent of the well waters bad or of questionable quality, and but 34.3 per cent above suspicion.

These figures show plainly the condition of our drinking waters.

With the facts now clearly before us, let us discuss the factors which may impair the quality of a water. Concisely stated, they are as follows:

First. The presence of substances which have a direct disturbing influence on the system. A particular instance is recognized in the use of hard waters by those who have been accustomed to soft, and *vice versa*. Many very hard waters containing iron cause dyspepsia; other naturally pure supplies are filled with lead, and so become very dangerous to the user; waters containing sulfates of magnesia and soda have a decided effect on the system. Dissolved vegetable matter in large amounts is credited with having an injurious effect, while bad odors and tastes, irrespective of their nature and origin, may be injurious to persons of delicate constitutions.

Second. The presence of the products of decay. It is well known that decaying animal and vegetable matter is unfit for food. In the process of decay, more particularly of animal matter, virulent poisons, or toxines, are often formed. It is possible that in grossly polluted waters the changes going on may produce some of these poisonous compounds.

Third. The presence of micro-organisms in the water. It has long been known that the waste products of human life are the most harmful of all forms of pollution. In seeking a cause for this harmful effect, we find the most ready explanation in the presence of the germs of disease. The numberless instances of the contamination of water by typhoid germs are abundant proof that we have our greatest enemy to healthful water in micro-organisms.

Since we now realize that under present conditions a great number of our water supplies are a constant menace to the public health, it becomes necessary to provide remedies which will avert the danger.

This problem is a hard one to work out, for it necessitates the abandonment of very many wells whose waters are polluted beyond all possibility of purification, and thus compelling search for a new supply. In some instances the expenditure of a few dollars will bring pure supplies to the

house by gravity, but in many other cases, in settlements of half a dozen families, or even less, the most advisable plan is the establishment of a common supply. The water can be raised from a spring, driven well, or stream to a standpipe or water tower, either by gravity or by a wind-mill, or other power, and thence piped to each householder. In this way the cost of establishing the system is reduced to a minimum for each person benefited, and a constant, safe, and wholesome supply is afforded.

In other cases where the water is but slightly contaminated, and where the cause is traceable to adjacent sink drains, cesspools, and privy vaults, the removal of these polluting influences will frequently restore the water to its normal condition.

In all cases wells should be so made that the entrance of surface water and drainage is impossible. This is best effected by bricking up the sides of the well for a distance of several feet below the surface. The bricks should be laid in cement, and thickly plastered both inside and out until impervious to water. Large earthen-ware pipes are obtainable, which, when carefully joined together by cement, afford perfect protection against the dreaded surface water.

Where danger is feared from lead poisoning, the only remedy is the substitution of the lead supply-pipe by some other approved pipe. Galvanized iron pipe will prove satisfactory in most cases. There is but little fear of zinc poisoning from its use.

METHODS EMPLOYED IN THE EXAMINATION OF WATER SUPPLIES.

We have been guided in our work by the valuable experience of the Massachusetts State Board of Health, whose investigations along the lines of pure water supplies have become classical. For the suggestions and advice they have so cordially given we express our sincere appreciation.

Since we have been obliged to rely upon the co-operation of untrained assistance in the collection of water samples, a bottle securely packed, together with full instructions for collecting and shipping, is sent to each person who requests the examination of a supply. A one-gallon bottle of clear, white glass, with mushroom stopper, is used. It is shipped in a strong wooden box, lined one inch thick with felt and left uncovered at the top. The stopper of the bottle projects above the top of the box, and thus insures the carriage of the sample in an upright position and prevents breakage through being covered by other articles. The package is marked "Laboratory of Hygiene, Concord, N. H.," and is well adapted to its purpose. There is no breakage of bottles, no freezing in winter, and the package is transported economically and without delay.

A tagged envelope, marked "Open for Instructions," is attached to the package and incloses a blank form with instructions and questions to be answered by the collector, a piece of cloth, sealing wax, and string for sealing the bottle securely and a return envelope addressed to the Laboratory of Hygiene. In this envelope the filled-out blank is placed. The instructions given and questions asked are as follows:

THE STATE OF NEW HAMPSHIRE,

STATE BOARD OF HEALTH, LABORATORY OF HYGIENE,

CONCORD, N. H.

WATER FOR ANALYSIS.—INSTRUCTIONS.

Read carefully and comply with the requirements in every particular.

1. FROM A WATER TAP.—The water should run freely from the tap for a few minutes before it is collected. The bottle is then to be placed directly under the tap, and rinsed out with water at least twice, pouring out the water completely each time. It is then again to be placed under the tap and filled to overflowing, and then a small quantity poured out, so that there shall be left an air space under the stopper of about an inch. The stopper must be rinsed off with flowing water and inserted into the bottle while still wet, and secured by tying over it a clean piece of cotton cloth. The ends of string must be sealed on top of the stopper. *Under no circumstances must the inside of the neck of the bottle or the stem of the stopper be touched by the hand or wiped with a cloth.*

2. FROM A STREAM, POND, OR RESERVOIR.—The bottle and stopper should be rinsed with the water, if this can be done without stirring up the sediment on the bottom. The bottle, with the stopper in place, should then be entirely submerged in the water and the stopper taken out at a distance of about twelve inches below the surface. When the bottle is full, the stopper is replaced below the surface, if possible, and finally secured as above. It will be found convenient in taking samples in this way to have the bottle weighted, so that it will sink below the surface. It is important that the sample should be obtained free from the sediment on the bottom of a stream and from the scum on the surface. If a stream should not be deep enough to admit of this method of taking a sample, the water must be dipped up with an absolutely clean vessel and poured into the bottle after it has been rinsed.

3. FROM A WELL.—Pump or draw the water in the usual manner, rinse the bottle and stopper, then fill, using all the precautions above mentioned, and seal as directed. The sample of water should be collected *immediately before shipping by express*, so that as little time as possible shall intervene between the collection of the sample and its examination.

NOTE. In order to interpret correctly the results of an analysis of a given sample of water it is necessary to take into account all the factors and conditions that may possibly impair its purity or in any manner affect its quality; therefore we desire that the following blank shall be filled out as accurately and as completely as possible and enclosed in the envelope tag used in shipping the sample to the Laboratory. No examination will be made unless these requirements are complied with.

SAMPLE OF WATER.

From
Name of town or city.

Collected and sealed by
Name and address.

Collected from
State whether the water is from a tap, or from stream, pond, reservoir, spring, well, or
other source:

Collected on
Give day, date, and hour of day.

If sample is from a well or spring near or about buildings, give particulars as follows:

Distance from privy
" " sinkdrain
" " cesspool
" " barnyards, etc.

Depth.....

Is the drainage slope from any of the above-named towards the well or spring?

If away from buildings, is the source from which sample was taken surrounded by or near to a field of grass, or plowed lands, manured land, in the woods, etc.? Give particulars fully:

Kind of soil and subsoil

In case there are any abnormal or unusual conditions (other than above named) existing in the source of the water, mention the facts—as, for instance, if the streams are swollen by recent heavy rains, or are unusually low, or if there is anything remarkable in the appearance of the water, or if any taste or odor has been observed.

Is there a suspicion that the water may be polluted? If so, state probable or possible source of contamination.....

Is the water now suspected as a cause of illness? If so, state particulars.

.....

 Signature
 Address
 Date.....190 .
 Sample received No.....

Upon receipt of the sample of water the tag envelope is opened, the blank form given a serial number, the bottle marked to correspond, and the number entered on the record book of the laboratory. A general sanitary analysis is made as soon as possible after the receipt of the sample, generally within twenty-four hours. The factors determined are the total and fixed solids, free and albuminoid ammonia, nitrates, nitrites, chlorine, hardness, color, odor, turbidity, sediment, and all general characteristics. If the water has passed through lead pipe, it is examined for lead, and if it appears that iron is present in any quantity the amount present is determined. If the water is suspected of causing typhoid fever, the specimen is examined bacteriologically, but in ordinary analysis we do not consider the bacteriological examination sufficiently necessary to warrant its being made in the case of the single samples that come to us.

These results, together with the information we have concerning the surroundings of the supply, enable us to determine the character of most of the polluted supplies and inform us as to the potability of the uncontaminated waters. Those waters which appear to be slightly polluted, but which are not sufficiently bad in quality to warrant condemnation, are kept under surveillance and repeatedly examined until the true character of the supply is determined.

RESULTS OF ANALYSES OF WATER SUPPLIES ARRANGED IN ORDER OF THEIR EXAMINATION.

[Results are given in parts per 100,000.]

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.*
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
1	1901. May 22	V. slight	Slight	Distinct veg.	0.0	2.9	1.8	.0015	.0275	.0048	.0000	.14	.....	.....	†g
2	May 22	V. slight	Slight	Faint veg.	0.0	.....	.....	.0013	.0122	.0048	.0000	.12	.....	.....	g
3	May 22	Slight	Cons.	Decided veg.	0.0	.....	.....	.0013	.0149	.0048	.0000	.13	.....	.....	g
4	May 23	Slight	Cons.	Decided veg.	0.0	2.5	1.2	.0013	.0137	.0050	.0000	.13	.....	.....	g
5	May 25	Slight	Slight	Decided musty	0.1	25.50	14.20	.0920	.0398	.2200	.0000	6.46	.....	.....	b
6	May 27	None	None	V. slight musty	0.0	5.60	4.20	.0011	.0000	.1250	.0000	.57	.....	.....	g
7	May 26	Slight	Much veg.	Slight veg.	0.4	4.10	1.90	.0018	.0155	.0000	.0000	.06	.....	.....	g
8	May 26	V. slight	Much veg.	Slight veg.	0.3	3.80	1.60	.0016	.0067	.0000	.0000	.08	.....	.....	g
9	May 26	V. slight	Much veg.	V. slight veg.	0.25	4.70	1.60	.0012	.0073	.0000	.0000	.07	.....	.....	g
10	May 27	Distinct	Cons.	Mouldy, pungent	0.6	15.60	9.20	.0372	.0083	.0000	.0000	.07	.....	.....	†b
11	May 28	V. slight	Slight	Distinct veg.	0.2	3.40	1.30	.0019	.0105	.0000	.0000	.09	.....	.....	g
12	May 29	None	V. Slight	Slight veg.	0.1	8.20	3.00	.0019	.0139	.3200	.0002	.35	.....	.....	b
13	May 29	None	None	Slight veg.	0.0	2.80	1.60	.0015	.0021	.0000	.0000	.07	.....	.....	g
14	May 30	None	Slight floc. veg.	Slight veg.	0.0	39.30	21.30	.0086	.0067	.8000	.0060	.90	.....	.....	b
15	May 30	None	Slight	Slight musty	0.0	10.70	5.60	.0002	.0024	.2000	.0002	3.37	.....	.....	b
16	June 2	None	Slight floc.	Slight veg.	0.0	3.50	1.00	.0021	.0005	.0266	.0000	.47	.....	.....	g
17	June 3	None	Much	Slight	0.1	3.60	1.20	.0014	.0057	.0066	.0000	.13	.....	.....	g
18	June 3	None	Much	Slight veg.	0.11	4.10	1.70	.0046	.0099	.0066	.0000	.13	.....	.....	g
19	June 3	None	Slight	Slight veg.	0.1	3.70	2.20	.0040	.0057	.0066	.0000	.13	.....	.....	g
20	June 8	Distinct	Slight	Foul	0.2	38.50	23.30	.1500	.2860	2.4000	.0040	4.66	.....	.....	b
21	June 8	None	Slight	Slight musty	0.0	18.60	11.20	.0028	.0183	.8000	.0001	1.09	.....	.....	b
22	June 10	V. slight	Slight	Slight musty	0.0	16.00	11.20	.0038	.0019	.8000	.0001	.63	.....	.....	b
23	June 11	None	Cons.	None	0.0	6.50	4.10	.0030	.0002	.2000	.0000	.70	.....	.....	g
24	June 12	V. slight	Slight	Foul	0.0	5.20	2.50	.0052	.0001	.0000	.0000	.13	.....	.....	g

* Waters containing lead, although they may be otherwise good, are reported as "bad"; "g" stands for good, "b" for bad, and "d" for doubtful.

† High albuminoid ammonia, due to heavy rains.

‡ Dynamite used in digging well.

EXAMINATION OF WATER SUPPLIES.

17

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
25	1901. June 12	V. slight	Slight	Musty	0.0	57.20	30.40	.0030	.0090	3.6000	.0004	8.24	.....	.....	b
26	June 23	None	Slight floc.	Slight veg	0.0	1.80	1.10	.0024	.0000	.0026	.0000	.19	.....	.....	g
27	June 24	V. slight	Slight floc.	Decided veg.	0.2	2.80	1.00	.0000	.0169	.0000	.0000	.18	.....	.....	g
28	June 24	None	Much veg.	Slight veg.	0.0	21.60	10.50	.0014	.0025	1.2000	.0000	2.12	.....	.....	b
29	June 25	None	Slight	Cons. veg.	0.0	2.00	7.20	.0024	.0000	1.2000	.0001	1.88	.....	.....	b
30	June 25	None	None	Faint veg.	0.0	4.40	2.80	.0000	.0000	.0166	.0000	.13	.....	.....	g
31	June 25	V. slight	Slight floc.	Foul	0.0	13.30	3.40	.0113	.0047	.6666	.0001	1.10	.....	.....	b
32	June 26	Much	Slight	Musty	0.0	36.60	26.30	.0158	.0000	1.0000	.0022	1.81	.....	.....	b
33	June 26	None	Slight floc.	Slight veg	0.3	4.60	2.80	.0000	.0115	.0000	.0000	.22	.....	.....	g
34	June 26	None	Cons.	V. slight	0.0	7.60	5.30	.0000	.0000	.0100	.0000	.31	.....	.....	g
35	June 26	V. slight	Much floc.	Musty	0.0	33.60	16.20	.0000	.0000	2.0000	.0002	6.07	....	.....	b
36	June 26	None	V. slight	Faint musty	0.0	6.10	3.00	.0000	.0050	.0000	.0000	.67	.....	.....	g
37	June 26	None	V. slight	Slight	0.0	25.80	9.30	.0000	.0000	2.0000	.0000	2.17	.....	.....	b
38	June 27	None	V. slight	Faint musty	0.0	7.50	4.40	.0000	.0000	.1000	.0000	1.02	.....	.....	d
39	June 29	None	V. slight	V. slight	0.0	27.10	13.60	.0000	.0082	1.5500	.0000	2.95	7.80	.....	b
40	June 29	None	Slight	Decided musty	0.0	31.20	15.90	.0034	.0000	1.0000	.0003	5.37	8.30	.....	b
41	July 2	None	None	Slight	0.0	9.50	6.20	.0000	.0059	.1000	.0000	.90	5.70	.....	d
42	July 3	None	None	V. slight	0.0	12.50	8.90	.0006	.0096	.8000	.0003	1.34	5.90	.....	d
43	July 2	None	Much floc. veg.	Marked veg.	0.45	4.50	.30	.0000	.0186	.0000	.0001	.18	.....	.....	g
44	July 3	None	Much veg.	Decided veg.	0.6	3.60	.60	.0049	.0199	.0000	.0000	.14	....	.....	g
45	July 1	None	None	None	0.0	0.80	.20	.0000	.0016	.0000	.0000	.15	.....	.....	g
46	July 3	None	None	None	0.0	7.80	4.00	.0000	.0016	.0300	.0000	.14	2.50	.....	g
47	July 4	None	None	Slight veg.	0.0	9.70	5.10	.0026	.0007	.4000	.0007	1.14	4.00	.....	d
48	July 5	None	Slight floc.	Aromat.	0.0	17.40	11.40	.0049	.0027	.0300	.0003	.43	10.00	.....	d
49	July 4	None	Slight	Decided veg.	0.0	4.40	2.20	.0000	.0046	.0400	.0003	.45	1.20	.....	g
50	July 4	None	Much floc. veg.	Strong fishy	0.0	10.70	4.20	.0000	.0028	.3000	.0001	.88	.....	.....	d
51	July 4	None	Slight floc.	Putrid veg.	0.0	6.90	3.60	.0000	.0040	.0400	.0002	.47	.....	.....	g
52	July 4	None	Cons. floc.	Strong veg. musty	0.0	11.40	4.80	.0000	.0024	.2500	.0001	1.18	....	.....	b
53	July 5	Marked	Much min.	None	0.0	6.70	4.10	.0073	.0090	.0000	.0000	.33	.....	.....	g
54	July 5	None	Cons. min.	None	0.0	6.00	3.40	.0028	.0100	.0900	.0001	.28	3.00	.....	g
55	July 8	None	None	Decided veg.	0.0	3.20	1.80	.0013	.0036	.0050	.0000	.34	1.50	.....	g
56	July 8	None	Slight floc.	None	0.0	17.10	9.50	.0008	.0038	1.5000	.0002	.84	6.00	.....	d
57	July 9	None	Floc. veg.	Decided veg.	0.12	5.00	2.00	.0009	.0104	.0050	.0002	.26	2.00	.....	g
58	July 9	None	None	Slight veg.	0.1	4.10	2.10	.0032	.0104	.0050	.0001	.20	1.90	.....	g

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.			RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.			
59	1901. July 9	None	None	M. floe. veg.	0.12	4.70	2.20	.0032	.0135	.0050	.0002	.20	.....	g
60	July 10	None	None	Decided veg.	0.7	4.50	2.50	.0074	.0167	.0050	.0003	.33	1.80	..... g
61	July 10	None	None	Slight musty	0.0	32.20	17.20	.0048	.0070	1.5000	.0006	3.21	10.00	..... b
62	July 12	Marked	Slight earthy	Slight mouldy	0.05	14.80	10.70	.0006	.0024	.6800	.0003	1.08	6.00	..... d
63	July 12	None	None	Decided musty	0.0	25.80	19.70	.0044	.0030	.3000	.1600	1.21	10.00	..... b
64	July 12	None	None	None	0.0	14.00	6.90	.0063	.0000	.0000	.0000	.63	6.00	..... g
65	July 13	None	None	Decided mouldy	0.0	8.40	5.40	.0057	.0039	.1600	.0007	.37	.....	g
66	July 15	None	None	None	0.0	13.50	8.20	.0000	.0052	.2500	.0000	1.44	.....	d
67	July 15	None	Slight floe.	Decided mouldy	0.0	24.20	19.50	.0028	.0096	1.2500	.0007	4.04	7.10	..... b
68	July 16	None	None	None	0.0	4.70	3.10	.0010	.0024	.0600	.0002	.22	2.40	..... g
69	July 16	None	Slight floe.	None	0.0	6.00	3.70	.0014	.0026	.1000	.0000	.40	.....	g
70	July 18	None	Slight floe.	Slight earthy	0.5	4.40	3.00	.0008	.0032	.0700	.0001	.21	2.40	..... g
71	July 19	None	None	Decided mouldy	0.0	36.70	20.10	.0059	.0174	2.5000	.0032	5.27	10.00	..... b
72	July 22	None	None	Slight mouldy	0.0	13.20	9.50	.0034	.0073	.6300	.0010	1.62	4.50	..... b
73	July 22	None	None	None	0.0	14.90	13.30	.0016	.0063	1.0000	.0000	.75	8.00	..... d
74	July 22	None	Slight	None	0.4	30.50	23.20	.0080	.0206	1.2500	.0024	1.87	14.50	..... b
75	July 22	None	None	None	0.0	3.80	2.90	.0026	.0034	.0000	.0000	.13	2.40	..... g
76	July 23	None	None	None	0.0	5.10	4.80	.0014	.0000	.0000	.0000	.07	2.40	.0150 g
77	July 23	None	Cons. floe. veg.	Slight veg.	0.15	6.40	5.60	.0016	.0020	.0040	.0000	.07	.....	g
78	July 24	None	None	None	0.0	3.90	2.70	.0036	.0052	.0200	.0000	.14	.....	.0100 g
79	July 24	None	None	None	0.0	14.90	10.00	.0012	.0000	.6000	.0001	2.06	6.00	..... d
80	July 24	None	Slight floe.	V. slight mouldy	0.0	16.60	9.50	.0046	.0068	.7000	.0000	1.68	.....	d
81	July 24	None	None	None	0.0	5.70	3.80	.0014	.0034	.0800	.0000	.49	.....	g
82	July 24	None	None	None	0.05	3.30	1.90	.0000	.0000	.0030	.0000	.14	.....	g
83	July 25	None	Much floe. veg.	Decided veg.	0.0	5.30	3.90	.0006	.0031	.0200	.0000	.29	2.90	..... g
84	July 26	None	None	Slight veg.	0.0	6.30	5.70	.0000	.0014	.2100	.0000	.36	4.00	..... g
85	July 26	None	None	Faint musty	0.0	17.80	9.50	.0020	.0072	.7200	.0000	1.41	6.40	..... d
86	July 26	None	None	None	0.0	7.20	6.50	.0010	.0030	.1900	.0000	.66	4.50	..... g
87	July 26	None	Much floe. veg.	Faint veg.	0.2	4.30	2.60	.0000	.0096	.0200	.0000	.16	2.00	..... g
88	July 26	None	Much floe. veg.	Faint veg.	0.2	4.00	2.20	.0032	.0130	.0050	.0000	.12	1.60	..... g
89	July 26	None	Much floe. veg.	Faint veg.	0.2	3.90	2.60	.0032	.0114	.0050	.0000	.12	2.40	..... g
90	July 26	None	None	None	0.0	2.40	2.10	.0000	.0018	.0060	.0000	.09	.....	g
91	July 27	None	Much floe. veg.	Faint musty	0.0	9.80	7.10	.0067	.0061	.0400	.0001	.71	.....	d
92	July 27	Marked	None	Faint	0.0	4.80	4.20	.0020	.0040	.0150	.0001	.39	3.60	1.7000 b

Analyses of Water Supplies.—Continued,

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
93	1901. July 30	None	None	Slight mouldy	0.0	5.00	3.50	.0000	.0014	.0480	.0014	.36	3.10	.....	d
94	July 30	None	Slight floc.	None	0.0	65.70	59.70	.0000	.0212	6.0000	.0037	6.13	17.20	.....	b
95	July 30	None	Slight floc.	Strong veg.	0.4	3.40	.80	.0000	.0242	.0000	.0000	.12	.....	.....	d
96	July 30	None	Much floc. veg.	Veg. and musty	1.1	4.30	2.20	.0036	.0180	.0000	.0000	.12	.....	.....	*b
97	July 30	None	Slight	Decided mouldy	0.3	4.50	1.80	.0074	.0150	.0080	.0000	.12	.....	.....	d
98	July 30	None	Slight	Decided aromat.	0.4	3.20	1.20	.0028	.0184	.0000	.0000	.14	.....	.....	d
99	July 29	Marked	Much min.	Foul	0.2	6.80	3.50	.0018	.0170	.0560	.0075	.29	.....	.....	b
100	July 31	None	Slight	Musty foul	0.0	16.80	13.10	.0050	.0202	.0200	.0033	.21	9.20	.....	b
101	Aug. 1	None	None	None	0.0	3.50	2.50	.0020	.0048	.0070	.0000	.17	2.40	.....	g
102	July 31	None	Slight floc.	Faint veg.	0.0	3.40	2.10	.0020	.0042	.0000	.0000	.14	2.00	.....	g
103	Aug. 1	None	None	None	0.0	4.80	2.70	.0028	.0022	.0100	.0000	.12	.....	.....	g
104	July 31	None	Much floc. veg.	Faint veg.	0.8	10.30	5.20	.0184	.0114	.2045	.0003	.69	5.10	.....	b
105	Aug. 5	None	None	Faint veg.	0.0	28.40	23.40	.0034	.0030	.2100	.0007	9.89	7.00	.....	b
106	Aug. 5	None	None	None	0.0	4.90	4.00	.0000	.0000	.0900	.0000	.39	2.80	.4800	b
107	Aug. 6	None	None	Decided veg.	0.12	3.30	.90	.0000	.0154	.0000	.0000	.11	.....	.....	g
108	Aug. 6	None	None	None	0.0	38.80	34.00	.0000	.0038	.8000	.0000	7.74	11.00	.....	b
109	Aug. 7	None	None	None	0.0	5.50	4.40	.0000	.0000	.0300	.0000	.17	3.20	.....	g
110	Aug. 7	Faint	None	Aromat.	0.0	4.30	1.30	.0032	.0140	.0000	.0000	.09	.....	.....	g
111	Aug. 8	Marked	Much min.	Faint veg.	0.0	9.10	6.10	.0030	.0064	.0100	.0001	.10	5.20	.....	g
112	Aug. 12	V. slight	Slight min.	Faint mouldy	0.0	5.40	3.80	.0016	.0030	.0300	.0001	.18	.....	.....	g
113	Aug. 12	Slight	Slight floc.	Decided veg.	0.1	4.00	1.40	.0014	.0156	.0000	.0000	.10	.....	.....	g
114	Aug. 12	None	Slight floc.	None	0.0	23.80	14.40	.0010	.0062	.7280	.0002	4.19	10.00	.....	b
115	Aug. 12	None	Much floc. earthy	Decided musty	0.0	16.10	9.80	.0030	.0060	.2030	.0003	3.41	.....	.....	b
116	Aug. 12	None	None	None	0.0	6.40	4.50	.0000	.0076	.0300	.0000	.14	.....	.....	g
117	Aug. 13	Marked	Much floc. veg.	Strong musty	0.0	12.00	8.80	.0202	.0108	.0600	.0001	1.96	.....	.....	b
118	Aug. 15	None	Floc. veg.	Foul	0.0	4.00	1.20	.0016	.0134	.0570	.0000	.04	.....	.....	g
119	Aug. 10	None	None	None	0.0	6.10	4.80	.0000	.0000	.0000	.0000	.24	1.90	.....	g
120	Aug. 16	None	Slight floc.	Faint veg.	0.0	14.00	8.30	.0000	.0010	.7000	.0000	1.13	3.05	.....	g
121	Aug. 15	Decided	Much floc. veg.	Foul mouldy	0.1	5.80	4.10	.0000	.0086	.0200	.0003	.24	1.80	.....	d
122	Aug. 15	None	V. slight floc.	None	0.0	10.50	5.40	.0014	.0072	.2500	.0006	.72	5.10	.2400	b
123	Aug. 19	Slight	None	Foul	0.0	5.40	3.90	.0006	.0014	.0000	.0000	1.72	.....	.....	b
124	Aug. 19	None	None	None	0.0	14.80	11.30	.0000	.0044	.5000	.0000	.84	8.00	.....	g
125	Aug. 19	None	None	None	0.0	25.60	20.30	.0020	.0022	.1200	.0000	4.05	7.40	.....	b

* Iron, .2360.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
126	1901. Aug. 19	None	None	Faint veg.	0.0	11.20	7.40	.0012	.0070	.2000	.0000	.98	5.50	.....	d
127	Aug. 21	None	Slight floc. veg.	Slight veg.	0.1	3.50	2.30	.0006	.0016	.0140	.0000	.29	.....	.....	g
128	Aug. 21	None	None	None	0.0	25.30	18.30	.0012	.0044	1.2000	.0000	3.68	8.20	.....	d
129	Aug. 21	None	None	None	0.0	.....	.....	.0006	.0036	.0180	.0000	.34	.....	.....	g
130	Aug. 22	None	None	Faint veg.	0.0	4.90	3.50	.0010	.0000	.0340	.0003	.39	.....	.1280	b
131	Aug. 23	None	None	Faint veg.	0.0	11.80	6.30	.0014	.0000	.1850	.0003	2.40	4.20	.....	d
132	Aug. 23	None	Slight floc.	None	0.0	6.20	3.80	.0020	.0052	.0260	.0003	.09	.....	.....	g
133	Aug. 23	V. slight	Slight	Aromat.	0.0	6.80	3.70	.0000	.0088	.0550	.0000	.24	.60	.....	g
134	Aug. 26	None	None	None	0.0	15.30	6.10	.0000	.0010	.0000	.0000	.88	2.90	.....	d
135	Aug. 26	None	Slight floc.	Faint veg.	0.0	20.60	9.60	.0068	.0024	1.2000	.0044	.44	3.50	.....	*d
136	Aug. 26	None	None	None	0.0	4.30	2.40	.0009	.0000	.0000	.0000	.09	.....	.....	g
137	Aug. 27	None	None	None	0.0	10.40	5.70	.0052	.0038	.4108	.0000	.86	2.80	.....	g
138	Aug. 28	Marked	Slight floc.	Faint musty	0.0	21.10	13.30	.0030	.0056	1.1540	.0016	3.69	4.70	.....	b
139	Sept. 1	None	Slight floc.	None	0.0	3.50	2.70	.0000	.0022	.0280	.0000	.09	.....	.....	g
140	Sept. 2	None	None	Faint musty	0.0	21.60	16.40	.0032	.0074	1.5000	.0005	3.38	10.00	.....	b
141	Sept. 2	None	V. slight	Strong of gas	0.0	5.40	3.50	.0014	.0020	.0280	.0000	.27	.....	.....	†g
142	Sept. 4	None	None	None	0.0	.....	.....	.....	.....	.....	.....	.20	.....	M'ch	b
143	Sept. 3	Faint	Much floc.	Musty	0.3	44.00	36.30	.0110	.0204	2.0000	.0038	8.23	7.40	.....	b
144	Sept. 3	Slight	Much floc. veg.	Faint veg.	0.1	6.10	5.70	.0016	.0032	.0760	.0004	.31	1.40	1.1000	b
145	Sept. 4	Marked	V. much floc.	Foul musty	1.2	20.10	12.90	.0046	.0288	.0450	.0703	2.23	5.00	.....	b
146	Sept. 4	None	None	None	0.0	4.30	3.10	.0014	.0106	.0000	.0000	.10	.....	.....	g
147	Sept. 5	None	V. slight floc.	Faint musty	0.0	12.80	8.50	.0018	.0022	.8000	.0001	1.17	5.00	.....	d
148	Sept. 5	None	None	None	0.0	43.00	36.10	.0012	.0026	3.0770	.0002	4.35	9.60	.....	b
149	Sept. 7	Faint	None	Faint mouldy	0.0	21.70	16.40	.0034	.0030	.1520	.0016	4.08	8.00	.....	b
150	Sept. 6	None	None	None	0.0	45.90	40.60	.0046	.0062	.6400	.0001	5.53	9.70	.....	b
151	Sept. 6	None	Much floc.	Decided veg.	0.12	2.10	1.00	.0008	.0082	.0090	.0000	.10	.....	.....	g
152	Sept. 9	None	None	None	0.2	5.10	3.20	.0012	.0074	.0120	.0000	.23	.....	.....	g
153	Sept. 9	None	Slight floc. veg.	None	0.3	5.20	3.70	.0034	.0172	.0120	.0000	.23	.....	.....	g
154	Sept. 9	None	Slight min.	Faint veg.	0.0	7.80	4.90	.0014	.0058	.1400	.0000	.78	4.10	.....	g
155	Sept. 10	None	Much floc.	Sl. oily veg.	0.1	3.70	1.80	.0026	.0046	.0000	.0001	.19	.50	.....	g
156	Sept. 10	Slight	Much floc. and min.	Faint	0.0	14.60	10.30	.0010	.0046	.2346	.0000	3.13	5.50	.....	b
157	Sept. 11	None	None	None	0.0	3.70	2.30	.0000	.0032	.0420	.0000	.15	.....	.....	g
158	Sept. 11	V. slight	None	Faint	0.0	13.10	11.00	.0010	.0060	.0160	.0000	.09	4.20	.....	†g

* Dynamite used in digging well. † Impregnated with illuminating gas.

† Same as No. 10.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
159	1901. Sept. 12	None	None	Decided veg.	0.15	5.10	3.30	.0016	.0112	.0000	.0000	.19	.....	.....	g
160	Sept. 12	None	Floc. veg.	Decided veg.	0.15	5.60	2.60	.0026	.0126	.0000	.0000	.19	.....	.....	g
161	Sept. 12	None	Floc. veg.	Decided veg.	0.15	6.80	2.60	.0024	.0108	.0000	.0000	.19	.....	.....	g
162	Sept. 12	None	None	Faint musty	0.0	34.40	20.40	.0020	.0070	1.2070	.0004	3.31	6.70	.....	b
163	Sept. 15	Slight	Floc. veg.	Musty	0.0	43.00	24.10	.0038	.0074	1.4000	.0010	8.89	7.40	.....	b
164	Sept. 16	Marked	Much min.	Mouldy	0.0	15.00	7.50	.0024	.0036	1.2000	.0014	.39	4.10	.....	d
165	Sept. 16	None	None	Foul musty	0.1	58.50	39.60	.0010	.1480	2.5000	.0002	7.44	9.70	.....	b
166	Sept. 17	None	Slight floc.	Faint earthy	0.0	8.90	5.60	.0000	.0024	.1800	.0000	.54	3.20	.....	g
167	Sept. 17	None	None	Faint veg.	0.0	13.40	9.00	.0000	.0010	.4000	.0000	2.19	3.70	.....	g
168	Sept. 19	Marked	Much floc.	Decided musty	0.0	38.50	31.10	.0026	.0148	2.0000	.0020	3.92	8.00	.....	b
169	Sept. 19	None	None	Foul musty	0.15	15.00	7.50	.0016	.0154	.0500	.0007	.58	5.29	.....	b
170	Sept. 22	Slight	Slight	Faint earthy	0.0	10.60	7.60	.0024	.0064	.2000	.0004	1.03	3.00	.....	b
171	Sept. 20	None	Slight veg.	None	0.0	3.70	1.60	.0054	.0116	.0333	.0000	.04	.....	.....	g
172	Sept. 23	None	None	None	0.0	19.70	12.60	.0040	.0054	1.3636	.0000	1.66	3.70	.....	d
173	Sept. 24	None	Floc. earthy	Faint musty	0.0	47.90	33.60	.0038	.0064	4.5450	.0004	3.48	8.40	.....	b
174	Sept. 24	Marked	Floc. earthy	Faint musty	0.0	35.70	19.80	.0026	.0052	1.7640	.0106	5.44	6.90	.....	b
175	Sept. 25	None	Floc. earthy	None	0.0	31.30	25.30	.0030	.0196	.9230	.0001	4.31	4.30	.....	b
176	Sept. 26	None	Much floc.	Foul musty	0.0	34.10	29.30	.0084	.0114	1.0520	.0003	5.27	7.10	.....	b
177	Sept. 26	None	Slight	Faint veg.	0.25	3.50	.60	.0028	.0180	.0000	.0000	.09	.....	.....	g
178	Sept. 26	None	Slight	Faint veg.	0.25	4.40	.90	.0026	.0180	.0000	.0000	.09	.....	.....	g
179	Sept. 29	None	None	Decided veg.	0.0	6.40	5.10	.0034	.0050	.1120	.0000	.62	4.40	.....	g
180	Sept. 27	None	None	None	0.0	3.90	2.20	.0036	.0036	.0180	.0011	.09	1.90	.3000	b
181	Sept. 30	None	None	Faint veg.	0.0	7.90	6.70	.0010	.0042	.0480	.0000	.29	4.00	.....	g
182	Sept. 30	None	Earthy floc.	None	0.0	12.70	8.10	.0000	.0016	.4000	.0000	.35	.40	.....	g
183	Sept. 30	Marked	Cons. earthy	Faint oily	0.0	16.30	9.40	.0062	.2044	.7690	.0077	.38	5.80	.....	b
184	Sept. 30	None	None	None	0.0	3.80	1.80	.0016	.0042	.0480	.0000	.03	.....	.....	g
185	Sept. 30	None	Floc. veg.	Faint veg.	0.2	3.70	1.90	.0026	.0096	.0000	.0000	.10	.....	.....	g
186	Oct. 1	None	Slight veg.	Decided veg.	0.12	2.80	1.30	.0016	.0166	.0000	.0000	.16	.....	.....	g
187	Oct. 1	None	None	Faint veg.	0.0	18.70	14.20	.0010	.0028	1.0764	.0000	1.45	6.40	.....	b
188	Oct. 1	Marked	Much floc. veg.	Oily	0.8	7.00	6.00	.0080	.0102	.1200	.0010	.78	.....	.....	b
189	Oct. 2	None	None	None	0.0	6.90	4.80	.0090	.0034	.4200	.0000	.49	.....	.....	d
190	Oct. 3	None	Slight min.	Foul	0.0	49.50	40.80	.0344	.0140	1.4280	.0100	8.42	10.70	.....	b
191	Oct. 4	None	Slight earthy	Foul	0.0	5.70	3.60	.0044	.0110	.0000	.0000	.20	3.60	.....	g
192	Oct. 4	Slight	Much floc. veg.	Veg.	0.0	11.50	8.60	.0020	.0072	.4000	.0004	1.21	5.00	.....	b

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPORATION		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
193	1901. Oct. 4	None	None	None	0.0	16.40	13.80	.0016	.0092	.4000	.0000	1.96	4.40	.....	g
194	Oct. 5	Slight	None	Decided foul	0.0	37.50	29.60	.1160	.0186	.1800	.0058	15.09	5.20	.....	b
195	Oct. 7	None	None	None	0.0	4.60	2.60	.0006	.0074	.0250	.0000	.09	....	.2800	b
196	Oct. 7	None	None	None	0.0	3.00	2.40	.0030	.0028	.0000	.0000	.07	2.20	.1600	b
197	Oct. 7	Slight	Slight floc.	Faint	0.05	4.30	3.30	.0050	.0032	.0000	.0000	.24	....	.2600	b
198	Oct. 9	None	None	Decided veg.	0.3	3.80	2.20	.0020	.0086	.0060	.0000	.04	....	....	g
199	Oct. 9	None	None	Decided musty	0.0	8.90	6.50	.0026	.0028	.1240	.0004	.76	4.50	.....	d
200	Oct. 10	None	Consid. veg.	Earthy veg.	0.0	4.40	2.80	.0040	.0078	.0420	.0000	.15	....	.....	g
201	Oct. 10	None	Floc. veg.	Decided veg.	1.4	5.60	2.20	.0042	.0276	.0000	.0002	.17	....	.....	d
202	Oct. 12	None	None	Aromat.	0.0	6.20	3.60	.0040	.0142	.0000	.0000	.17	....	.1600	b
203	Oct. 10	None	None	None	0.0	4.50	3.50	.0000	.0000	.0100	.0000	.08	....	.....	g
204	Oct. 10	None	None	None	0.0	9.20	8.00	.0050	.0020	.2000	.0000	.36	2.20	.....	g
205	Oct. 11	None	Silica	Slight	0.0	15.70	11.30	.0048	.0034	1.4000	.0001	1.17	3.80	.....	*b
206	Oct. 11	Marked	V. much rust iron	Foul musty	Red.	8.20	6.50	.0148	.0016	.0000	.0000	.78	....	.....	†b
207	Oct. 11	Marked	Much iron rust	Foul	Red.	9.50	7.30	.0138	.0124	.0840	.0009	.70	....	.....	†b
208	Oct. 11	None	None	Slight earthy	0.0	20.00	11.90	.0032	.0072	.2200	.0001	3.76	4.70	.....	b
209	Oct. 15	Marked	Floc. and min.	Foul	0.4	9.00	5.90	.0040	.0128	.1800	.0012	.31	3.90	.....	b
210	Oct. 14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.2000	b
211	Oct. 16	None	None	None	0.0	6.60	4.10	.0000	.0044	.0460	.0000	.61	3.50	.....	g
212	Oct. 16	None	None	None	0.0	11.40	7.20	.0040	.0106	.1400	.0012	.21	5.30	.....	d
213	Oct. 17	None	Slight floc.	None	0.0	4.90	1.90	.0026	.0090	.0310	.0002	.09	....	.....	g
214	Oct. 17	Slight	Much floc. and sand	Slight musty	0.0	3.80	3.30	.0040	.0088	.0300	.0009	.78	2.10	.....	b
215	Oct. 17	None	None	None	0.0	2.10	1.40	.0010	.0070	.0000	.0000	.07	1.10	.....	g
216	Oct. 17	Slight	Much floc.	Musty	0.0	11.50	6.80	.0036	.0082	.7140	.0005	.31	3.50	.....	d
217	Oct. 17	None	V. slight	Musty	0.05	18.20	14.60	.0146	.0186	.5400	.0024	1.42	4.80	.....	b
218	Oct. 18	V. mark.	Slight min.	Foul musty	0.0	15.00	10.00	.0172	.0190	.5710	.0014	.32	4.20	.....	b
219	Oct. 18	None	None	Slight veg.	0.0	3.30	2.00	.0000	.0138	.0060	.0000	.07	1.10	.0920	b
220	Oct. 18	None	Slight floc.	None	0.0	4.00	2.70	.0000	.0042	.0220	.0000	.04	....	.0560	d
221	Oct. 21	None	Slight	Faint	0.2	37.00	27.10	.0058	.0300	2.0000	.0002	2.70	5.20	.....	b
222	Oct. 21	None	Slight	V. foul	0.0	7.90	5.20	.0610	.0240	.0000	.0001	.39	1.95	.....	b
223	Oct. 22	Slight	V. much floc.	Decided earthy	0.5	12.00	5.60	.0044	.0210	.0400	.0002	.39	5.00	.....	†b
224	Oct. 25	Marked	Slight min. and floc.	Foul	4.0	17.20	10.10	.0840	.0208	.0000	.0002	1.47	4.40	.....	††b
225	Oct. 25	None	None	None	0.0	3.20	1.30	.0016	.0036	.1800	.0001	.09	....	.0550	d

* B. Coli Communis present.

† Much iron present.

† Iron, .2000.

†† Iron, 1.3000.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
226	1901. Oct. 25	None	Much floc.	None	0.1	3.40	2.20	.0010	.0020	.0000	.0000	.19	1.10	.....	g
227	Oct. 28	None	None	Veg.	0.0	4.90	3.90	.0022	.0074	.0000	.0000	.23	1.20	.0310	g
228	Oct. 27	None	Slight	Decided veg.	0.1	2.80	1.50	.0000	.0176	.0000	.0000	.21	1.20	.....	g
229	Oct. 27	None	Slight	Decided veg.	0.1	3.00	1.20	.0000	.0092	.0000	.0000	.23	1.20	.....	g
230	Oct. 28	None	None	None	0.0	5.30	3.00	.0012	.0160	.0000	.0000	.14	2.00	.0420	g
231	Oct. 28	None	None	Faint musty	0.0	17.20	10.80	.0014	.0054	.8330	.0007	1.47	4.80	.....	b
232	Oct. 28	.....	.....	.....	.....	.....	.....	.0016	.0180	.....	.....	.09	.....	.....	g
233	Oct. 28	None	Slight floc. and min.	Faint veg.	0.0	10.50	5.40	.0010	.0024	.4170	.0000	.90	2.70	.....	g
234	Oct. 28	None	None	Faint veg.	0.4	3.40	1.60	.0016	.0094	.0100	.0000	.06	.....	.....	*g
235	Oct. 29	None	None	V. faint	0.0	21.00	12.80	.0016	.0086	1.0500	.0005	3.34	5.50	.....	b
236	Oct. 28	None	None	None	0.0	7.10	4.40	.0028	.0044	.0200	.0003	.07	.....	.....	g
237	Oct. 28	None	None	None	0.0	9.20	5.30	.0028	.0054	.0200	.0003	.07	.....	.....	g
238	Oct. 30	Marked	Much min.	Faint earthy	0.0	7.40	3.80	.0044	.0068	.0200	.0006	.49	2.90	.....	d
239	Oct. 30	Slight	Slight	Fishy	0.0	6.80	4.30	.0020	.0032	.1250	.0000	.46	1.50	.....	g
240	Oct. 30	None	None	Faint veg.	0.0	8.50	5.60	.0024	.0020	.0050	.0000	.04	1.90	.0080	g
241	Oct. 31	None	None	None	0.0	7.80	5.70	.0010	.0040	.0200	.0004	.07	2.40	.....	g
242	Oct. 31	Slight	Much floc. iron	Foul	0.0	18.00	12.60	.0240	.0036	.5000	.0160	1.96	4.50	.....	b
243	Oct. 31	None	None	None	0.0	32.70	26.50	.0026	.0048	.3840	.0000	4.50	4.40	.....	b
244	Nov. 4	None	None	Slight foul	0.0	9.40	6.10	.0110	.0014	.3260	.0011	.68	3.20	.....	b
245	Nov. 4	None	None	Slight veg.	0.0	15.90	13.00	.0010	.0092	.5500	.0000	1.47	2.85	.....	b
246	Nov. 4	None	None	Faint	0.0	5.50	2.40	.0010	.0080	.0000	.0000	.19	.....	.....	g
247	Nov. 5	None	None	Faint	0.0	35.60	27.50	.0050	.0272	2.0000	.0006	2.94	5.40	.....	b
248	Nov. 5	None	None	None	0.0	4.80	2.40	.0016	.0012	.1000	.0001	.19	.....	.....	g
249	Nov. 5	Marked	Floc. veg.	Foul	0.0	31.10	20.80	.0062	.0080	.5000	.0012	2.94	8.10	.....	b
250	Nov. 5	Opales.	None	Slight	0.0	30.10	23.40	.0010	.0050	.2410	.0001	4.03	8.00	.....	b
251	Nov. 5	Slight	Floc. veg.	Slight	0.0	6.10	4.20	.0020	.0070	.0800	.0001	.98	4.50	.....	g
252	Nov. 5	None	None	Foul	0.0	22.50	14.20	.0070	.0054	.0000	.0000	1.25	7.50	.....	td
253	Nov. 5	None	None	.....	0.0	49.30	35.30	.0034	.0090	.6660	.0001	7.84	9.10	.....	b
254	Nov. 5	None	None	None	0.0	17.00	9.60	.0018	.0042	.4000	.0001	1.54	.....	.....	b
255	Nov. 6	None	Slight floc.	None	0.0	36.30	23.00	.0122	.0052	1.3320	.0009	4.60	.....	.....	b
256	Nov. 6	None	Slight floc.	None	0.0	6.20	4.80	.0020	.0032	.4000	.0001	.98	.....	.....	g
257	Nov. 6	None	None	Faint veg.	0.4	20.00	13.10	.0010	.0096	.0000	.0000	.09	.....	.....	g
258	Nov. 6	None	None	None	0.0	11.90	9.30	.0000	.0060	.1200	.0001	1.40	.....	.....	d

* Sulfurous acid, .0040.

† Sulfates present in large amount.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO' N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
259	1901. Nov. 6	None	None	None	0.0	19.30	16.20	.0034	.0068	.2100	.0001	3.82	.....	.....	b
260	Nov. 6	None	None	None	0.0	7.20	5.40	.0000	.0048	.0400	.0000	.09	.....	.....	g
261	Nov. 6	None	Much floc.	Slight musty	0.0	19.40	11.50	.0134	.0166	.4000	.0009	3.82	.....	.....	b
262	Nov. 7	None	Floc.	Faint grassy	0.0	56.80	40.30	.0008	.0138	2.5000	.0020	9.87	6.70	.....	b
263	Nov. 7	None	None	Faint	0.0	67.60	47.80	.0042	.0092	2.0000	.0001	8.82	9.40	.....	b
264	Nov. 7	None	Slight	Slight musty	0.0	42.30	30.30	.0014	.0054	1.0000	.0004	3.43	7.50	.....	b
265	Nov. 7	None	None	None	0.0	42.60	34.20	.0014	.0042	.1000	.0001	5.01	10.60	.....	b
266	Nov. 7	None	None	None	0.0	72.10	48.20	.0026	.0094	1.6660	.0027	5.95	11.00	.....	b
267	Nov. 7	None	None	V. slight veg.	0.5	7.00	4.10	.0060	.0059	.4000	.0000	.19	.....	.....	g
268	Nov. 8	None	None	None	0.0	14.80	5.60	.0046	.0058	.5550	.0003	1.47	.....	.....	b
269	Nov. 8	None	None	Slight veg.	0.0	9.90	2.60	.0010	.0030	.0000	.0000	.09	.....	.....	g
270	Nov. 8	None	None	Slight veg.	0.0	8.40	7.00	.0048	.0046	.0500	.0000	.19	6.15	.....	g
271	Nov. 8	None	None	None	0.0	15.80	12.20	.0000	.0036	.1300	.0000	1.05	6.40	.....	b
272	Nov. 7	Marked	Much floc.	Foul	0.0	19.30	12.00	.0320	.0088	.3330	.0380	1.19	.....	.....	b
273	Nov. 8	None	Slight floc.	None	0.0	8.20	4.80	.0000	.0000	.0000	.0000	.05	2.30	.....	g
274	Nov. 8	None	None	None	0.0	6.40	3.40	.0034	.0068	.0200	.0000	.04	.....	.....	g
275	Nov. 8	None	None	None	0.0	12.50	10.30	.0012	.0044	.0000	.0000	.14	2.40	.0220	d
276	Nov. 10	None	None	Slight musty	0.0	22.10	14.30	.0000	.0066	2.5000	.0003	1.96	4.20	.....	b
277	Nov. 11	Slight	Floc.	Faint	0.5	25.20	16.30	.0028	.0382	.5890	.0000	3.11	5.00	.....	b
278	Nov. 20	None	None	None	0.0	5.00	3.80	.0000	.0014	.0000	.0000	.13	3.40	.....	* d
279	Nov. 19	None	None	None	0.0	19.10	13.40	.0004	.0022	.4545	.0000	1.76	7.30	.0150	b
280	Nov. 20	None	None	Faint	0.0	5.90	3.40	.0022	.0012	.2630	.0000	.53	.....	.....	g
281	Nov. 20	None	Slight min.	None	0.0	12.40	4.80	.0000	.0028	.3220	.0000	1.58	.....	.....	b
282	Nov. 20	None	Slight	None	0.0	28.20	19.10	.0008	.0036	1.2500	.0000	1.80	14.00	.....	b
283	Nov. 21	None	None	Musty	0.0	24.10	18.20	.0008	.0054	1.0000	.0003	2.69	7.90	.....	b
284	Nov. 21	None	Slight floc.	Veg.	0.0	3.80	2.30	.0010	.0026	.0000	.0000	.14	.....	.....	g
285	Nov. 21	None	None	Faint veg.	0.0	8.30	6.50	.0006	.0076	.0100	.0000	.14	.....	.....	g
286	Nov. 22	None	Slight	Slight veg.	0.0	13.90	10.20	.0030	.0069	.3330	.0000	2.05	8.10	.....	b
287	Nov. 25	None	Slight	Slight veg.	0.0	21.00	14.10	.0000	.0072	1.0000	.0000	1.76	6.50	.....	b
288	Nov. 25	Much clay	Slight clay	None	0.1	4.70	3.20	.0012	.0000	.0030	.0001	.13	.....	.....	† g
289	Nov. 25	None	None	Slight veg.	0.0	1.80	.90	.0000	.0044	.0000	.0000	.04	.....	.....	g
290	Nov. 25	None	None	None	0.0	8.50	6.90	.0010	.0208	.0800	.0000	.13	4.80	.....	g
291	Nov. 25	None	None	None	0.0	9.10	6.90	.0014	.0040	.0500	.0000	.29	5.80	.....	g

* Much zinc present.

† Water very turbid.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONTA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
292	1901. Nov. 26	None	None	None	*	10.70	6.60	.0018	.0058	.5000	.0000	1.61	.....	.....	b
293	Nov. 21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.70	.....	fg
294	Nov. 28	None	V. slight floc.	Decided veg.	0.0	5.00	3.80	.0082	.0030	.0000	.0000	.09	3.60	.0200	d
295	Nov. 26	None	V. slight floc.	Decided veg.	0.0	6.60	5.10	.0000	.0046	.0000	.0000	.27	.....	.....	g
296	Nov. 28	None	None	None	0.0	5.00	3.50	.0000	.0000	.1250	.0000	.18	.....	.....	g
297	Nov. 29	None	Slight floc.	None	0.0	18.40	13.40	.0038	.0044	.9440	.0000	2.35	3.60	.....	b
298	Dec. 2	None	None	Faint musty	0.0	15.90	11.70	.0000	.0044	.4500	.0000	1.99	3.20	.....	b
299	Dec. 2	None	Much iron	Slight veg.	0.1	5.70	3.40	.0000	.0014	.0700	.0000	.20	.....	.....	g
300	Dec. 2	None	V. slight	None	0.0	9.80	6.00	.0040	.0000	.3330	.0160	.76	3.20	.....	b
301	Dec. 1	None	V. slight	None	0.0	5.80	2.10	.0022	.0010	.1000	.0000	.19	1.90	.....	g
302	Dec. 3	Marked	Slight	V. foul	1.0	15.20	10.10	.0020	.0146	.1000	.0011	.63	8.00	.....	†b
303	Dec. 3	None	None	None	0.0	9.70	7.60	.0010	.0024	.0080	.0000	.24	2.90	.....	g
304	Dec. 3	None	None	None	0.0	5.40	3.80	.0010	.0042	.0000	.0000	.12	1.60	.....	g
305	Dec. 2	Slight	V. much floc.	Foul	0.15	3.00	1.50	.0696	.0094	.0000	.0000	.08	.....	.....	b
306	Dec. 4	Slight	Much floc.	Decided veg.	0.6	3.00	1.80	.0000	.0094	.0000	.0000	.08	1.50	.0400	g
307	Dec. 3	None	None	None	0.0	5.40	4.20	.0010	.0008	.0820	.0000	.63	1.40	.....	g
308	Dec. 5	None	Slight floc.	Slight veg.	0.0	4.40	3.20	.0016	.0000	.0740	.0008	.09	.....	.....	g
309	Dec. 5	None	Floc.	Earthy	0.0	7.00	4.80	.0000	.0016	.0700	.0000	.98	.....	.....	g
310	Dec. 6	None	Slight earthy	Slight earthy	0.0	9.40	5.70	.0052	.0018	.5000	.0001	.58	2.30	.....	g
311	Dec. 6	None	None	None	0.0	15.10	11.40	.0000	.0030	1.0000	.0001	2.74	3.10	.....	b
312	Dec. 6	None	Slight floc.	Slight veg.	0.0	4.60	2.10	.0010	.0030	.0200	.0000	.39	.....	.....	g
313	Dec. 6	Slight	Slight earthy	V. faint earthy	0.0	10.90	7.50	.0018	.0030	.2000	.0000	.74	2.70	.....	g
314	Dec. 6	None	None	None	0.0	13.90	11.60	.0026	.0220	.0400	.0002	.39	1.90	.....	d
315	Dec. 7	None	Slight	Slight veg.	0.0	4.60	3.60	.0006	.0020	.0400	.0000	.27	.90	.....	g
316	Dec. 6	Slight	None	None	0.0	10.30	5.70	.0020	.0114	.0400	.0002	.09	5.50	.....	g
317	Dec. 6	None	None	None	0.0	5.00	3.60	.0000	.0028	.0160	.0000	.19	1.60	.0460	d
318	Dec. 9	None	None	Slight veg.	0.05	3.70	2.80	.....	.....	.0160	.0000	.07	1.10	.0200	g
319	Dec. 8	None	Floc. veg.	Slight earthy	0.0	5.70	4.80	.0000	.0018	.0600	.0000	.53	2.20	.....	g
320	Dec. 9	None	None	Slight veg.	0.0	7.50	5.90	.0006	.0026	.0160	.0000	.09	2.70	.0800	b
321	Dec. 10	None	None	None	0.0	15.60	12.10	.0010	.0036	.3330	.0001	3.28	4.10	.....	b
322	Dec. 12	None	None	Slight fishy	0.0	28.90	21.80	.0010	.0080	1.0000	.0002	6.49	5.20	.....	b
323	Dec. 12	None	None	Decided veg.	1.0	4.50	2.40	.0050	.0600	.0000	.0000	.08	.70	.....	d
324	Dec. 12	None	None	Decided veg.	0.9	5.80	2.50	.0050	.0580	.0000	.0000	.11	.60	.....	d

* Bluish.

† Examined to determine solvent action on lead pipe.

‡ Iron, .2000.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
325	1901. Dec. 12	None	None	None	0.0	1.40	.40	.0000	.0082	.0000	.0000	.01	.....	.....	* g
326	Dec. 12	None	None	None	0.0	2.30	1.20	.0010	.0046	.0000	.0000	.01	.....	.....	* g
327	Dec. 10	None	None	Slight foul	0.0	9.30	7.00	.0009	.0076	.1250	.0002	.80	2.00	.....	g
328	Dec. 13	None	None	None	0.0	12.60	9.80	.0038	.0176	.3330	.0003	1.29	3.30	.....	b
329	Dec. 14	None	None	Slight veg.	0.0	4.60	3.10	.0016	.0038	.0500	.0003	.11	2.20	.0350	d
330	Dec. 18	None	None	Slight veg.	0.0	2.50	1.80	.0008	.0216	.0000	.0000	.09	.....	.0000	g
331	Dec. 18	None	Slight floc. veg.	Veg.	0.7	3.90	1.80	.0020	.0374	.0000	.0000	.12	.40	.....	g
332	Dec. 19	None	None	Decided veg.	0.0	4.80	2.40	.0010	.0016	.1250	.0000	.41	1.80	.2100	b
333	Dec. 19	None	Floc.	Slight earthy	0.0	9.60	5.20	.0006	.0030	.5350	.0000	1.27	2.40	.....	g
334	Dec. 19	None	Slight floc.	Peculiar earthy	0.0	16.70	13.30	.0030	.0370	1.6660	.0007	2.00	2.40	.....	b
335	Dec. 18	None	None	Slight veg.	0.0	3.50	2.50	.0000	.0032	.0180	.0000	.12	.40	.....	g
336	Dec. 19	None	Slight floc.	Foul	0.0	11.90	7.50	.0000	.0136	.2000	.0000	1.77	1.60	.....	b
337	Dec. 20	None	None	Slight veg.	0.05	3.40	2.80	.0008	.0034	.0400	.0000	.18	.80	.....	g
338	Dec. 20	None	None	Slight veg.	0.05	4.00	2.40	.0014	.0050	.0220	.0000	.16	.80	.....	g
339	Dec. 20	None	None	Slight veg.	0.05	4.40	1.40	.0026	.0054	.0760	.0000	.30	.80	.....	g
340	Dec. 23	None	None	Slight earthy	0.0	6.40	4.30	.0030	.0052	.1100	.0000	.72	2.80	.....	g
341	Dec. 23	None	None	Decided veg.	0.0	3.90	2.00	.0000	.0022	.0000	.0000	.17	.65	.0000	g
342	Dec. 23	Marked	Floc. veg.	Strong earthy	0.2	29.80	25.10	.0036	.0148	.6660	.0001	8.88	3.40	.....	b
343	Dec. 23	None	None	Strong e't'y veg.	0.2	17.70	13.00	.0840	.0182	1.1100	.0200	2.52	3.10	.....	b
344	Dec. 19	.....	.....	.....	.....	3.20	.....	.....	.....	.....	.....	.....	.....	.....	†
345	Dec. 31 1902.	None	None	None	0.0	2.90	1.20	.0044	.0136	.0050	.0000	.09	.90	.....	g
346	Jan. 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.05	1.10	.0520	b
347	Jan. 3	Slight	Slight veg. and min.	Earthy veg.	0.2	5.30	3.80	.0074	.0076	.0400	.0000	.06	1.60	.....	g
348	Jan. 5	None	None	Veg.	0.2	2.50	1.10	.0032	.0162	.0000	.0000	.09	.40	.....	g
349	Jan. 5	None	None	Veg.	0.2	2.30	1.10	.0032	.0172	.0000	.0000	.08	.40	.....	g
350	Jan. 6	None	None	None	0.0	4.10	3.10	.0018	.0042	.0400	.0000	.12	1.10	†	g
351	Jan. 6	None	None	None	0.0	5.10	3.10	.0024	.0080	.2100	.0000	.42	1.40	.0360	d
352	Jan. 6	Slight	Earthy	Slight earthy	0.0	5.90	4.00	.0026	.0064	.3000	.0001	.85	1.60	.....	g
353	Jan. 6	None	None	None	0.0	7.60	5.90	.0028	.0016	.1200	.0000	.30	3.10	.....	g
354	Jan. 6	None	Slight earthy	None	0.1	2.80	1.00	.0000	.0046	.0000	.0000	.05	.....	.0480	b
355	Jan. 8	None	Slight floc. veg.	None	0.0	5.00	1.30	.0074	.0110	.0050	.0000	.47	.....	.....	g
356	Jan. 7	None	None	Slight earthy	0.0	4.80	3.10	.0022	.0024	.0750	.0000	.20	2.20	.....	g
357	Jan. 11	None	None	Veg.	0.1	3.20	1.20	.0030	.0138	.0000	.0000	.14	1.10	.....	g

* Ice.

† Magnesium sulfate, .4675.

† Trace.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
358	1902. Jan. 11	None	Floc.	Foul	0.0	13.10	11.80	.0060	.0038	.2000	.0005	.80	6.70	.....	b
359	Jan. 12	None	None	None	0.0	3.20	1.90	.0044	.0108	.0400	.0000	.27	1.40	*	g
360	Jan. 16	None	None	None	0.0	8.10	5.60	.0020	.0204	.1000	.0000	.37	5.10	.....	g
361	Jan. 17	None	None	Decided veg.	0.2	3.90	1.70	.0044	.0236	.0000	.0000	.07	1.10	.....	g
362	Jan. 20	None	None	None	0.0	5.00	2.90	.0024	.0098	.0900	.0000	.32	2.20	.....	g
363	Jan. 21	None	Floc. veg.	Faint grassy	0.0	7.00	4.80	.0048	.0088	.1000	.0000	1.26	2.60	.....	g
364	Jan. 20	None	None	None	0.0	5.00	1.50	.0064	.0132	.0150	.0000	.09	.....	.....	g
365	Jan. 20	None	None	None	0.0	2.50	.00	.0042	.0056	.0000	.0000	.02	.00	.....	† g
366	Jan. 20	None	None	None	0.0	3.00	.00	.0080	.0130	.0000	.0002	.03	.00	.....	† g
367	Jan. 20	None	None	None	0.0	3.80	.80	.0064	.0136	.0000	.0003	.05	.00	.....	† g
368	Jan. 20	None	None	None	0.0	3.10	.20	.0044	.0084	.0000	.0001	.02	.00	.....	† g
369	Jan. 21	None	None	Decided veg.	0.8	5.70	.20	.0054	.0204	.0000	.0000	.12	...	.....	g
370	Jan. 21	None	None	Decided veg.	0.7	5.50	.60	.0044	.0228	.0000	.0000	.16	.....	.....	g
371	Jan. 21	None	None	Decided veg.	0.7	5.70	1.00	.0020	.0188	.0000	.0000	.21	.70	.....	g
372	Jan. 21	None	None	Decided veg.	1.0	9.10	1.60	.0012	.0156	.0000	.0000	.17	.70	.....	g
373	Jan. 21	None	None	Decided veg.	0.7	7.20	2.20	.0052	.0230	.0200	.0002	.45	1.40	.....	d
374	Jan. 21	None	None	Decided veg.	0.5	6.50	1.70	.0024	.0100	.0000	.0000	.19	1.10	.....	g
375	Jan. 21	None	None	Decided veg.	0.3	4.50	1.70	.0010	.0098	.0000	.0000	.17	1.40	.....	g
376	Jan. 24	None	None	V. slight	0.0	11.90	8.50	.0010	.0064	.1900	.0000	1.62	4.20	.....	g
377	Jan. 24	V. slight	Slight floc.	V. slight	0.0	6.20	3.10	.0010	.0050	.3500	.0000	.31	2.60	.....	g
378	Jan. 25	None	None	Slight earthy	0.0	8.10	5.60	.0026	.0072	.2200	.0000	.50	3.30	.....	g
379	Jan. 26	None	Slight	Slight earthy	0.0	15.00	13.00	.0020	.0088	.3000	.0002	1.00	7.00	.....	g
380	Jan. 26	None	None	Slight clay	0.0	15.80	13.20	.0000	.0018	.6000	.0002	1.25	6.50	.....	d
381	Jan. 26	None	V. slight	None	0.0	14.90	9.10	.0010	.0034	.3500	.0001	1.00	6.80	.....	g
382	Jan. 27	None	Slight floc.	Faint earthy	0.0	8.00	4.60	.0018	.0056	.4000	.0000	.80	2.20	.....	g
383	Jan. 28	None	None	Slight	0.0	9.30	5.90	.0012	.0036	.5000	.0000	.41	2.20	.....	g
384	Jan. 28	None	Much min.	Decided	0.0	6.50	3.30	.0000	.0018	.0200	.0000	.09	2.70	.....	g
385	Jan. 25	None	V. slight	.....	0.0	7.40	4.90	.0012	.0064	.0400	.0001	.55	1.90	.....	g
386	Jan. 31	None	None	Veg.	0.0	5.10	2.80	.0000	.0054	.0050	.0000	.07	.60	.0000	g
387	Feb. 1	None	Floc.	Earthy veg.	0.2	5.90	1.30	.0000	.0086	.0210	.0000	.10	.....	.....	g
388	Feb. 3	None	None	None	0.0	8.50	4.40	.0012	.0062	.1500	.0000	.22	1.20	.0000	g
389	Feb. 5	Slight	Floc. veg.	Earthy	0.0	14.70	7.50	.0000	.0042	.9000	.0001	1.26	4.10	.....	d
390	Feb. 3	Marked	None	Earthy	0.0	9.70	6.10	.0000	.0052	.1000	.0000	.22	2.40	.....	g

* Trace.

† Ice.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
391	1902. Feb. 3	Marked	None	None	0.0	14.10	8.50	.0054	.0080	.0000	.0000	.65	3.90	.....	g
392	Feb. 5	Marked	Earthy	None	0.0	12.80	8.10	.0012	.0062	.2100	.0001	.90	5.80	.....	g
393	Feb. 6	None	None	Decided veg.	0.2	6.10	2.60	.0000	.0090	.0000	.0000	.07	1.20	.....	g
394	Feb. 6	Marked	None	Woody	0.05	7.70	5.20	.0158	.0058	.0000	.0013	.22	3.70	.....	* d
395	Feb. 10	V. slight	Floc.	Slight foul	0.0	17.40	11.90	.0020	.0254	.7000	.0001	1.95	5.00	.....	b
396	Feb. 10	None	V. slight	V. faint	0.1	5.60	3.20	.0000	.0150	.0900	.0000	.32	3.10	.....	g
397	Feb. 10	None	None	None	0.0	10.10	5.60	.0020	.0070	.2800	.0003	.82	2.00	.....	g
398	Feb. 10	V. slight	V. slight	Veg.	0.12	3.90	1.90	.0044	.0136	.0000	.0000	.12	.90	.....	g
399	Feb. 12	None	None	None	0.0	3.10	2.20	.....	.....	.0000	.0000	.15	1.10	.0650	d
400	Feb. 12	.....	.....	.....	0.0	18.80	15.80	.....	.....	1.0000	.0001	2.20	5.10	.....	b
401	Feb. 12	None	Slight floc.	Slight grassy	0.0	9.10	5.40	.0000	.0024	.3000	.0000	1.00	2.20	.....	g
402	Feb. 14	None	None	None	0.0	11.50	6.60	.0000	.0014	.3200	.0000	1.16	4.20	.....	d
403	Feb. 12	None	None	Flat	0.0	2.60	1.20	.0144	.0016	.0000	.0000	.02	.00	.....	† g
404	Feb. 14	None	V. slight	Veg.	0.1	5.80	3.40	.0006	.0070	.0200	.0000	.10	1.60	.....	g
405	Feb. 14	None	None	Min. and veg.	0.0	1.80	.40	.0034	.0024	.0000	.0001	.04	.00	.....	† g
406	Feb. 14	None	None	None	0.0	2.40	.40	.0040	.0046	.0000	.0001	.03	.00	.....	† g
407	Feb. 15	None	None	None	0.0	1.50	.40	.0006	.0016	.0000	.0000	.02	.00	.....	† g
408	Feb. 17	None	None	Earthy	0.0	14.30	10.30	.0450	.0072	.6500	.0004	2.00	4.40	.....	b
409	Feb. 18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0000	g
410	Feb. 18	None	None	Slight foul	0.0	12.60	8.20	.0014	.0058	.8000	.0001	1.42	3.30	.....	b
411	Feb. 20	Slight	Slight floc.	None	0.0	6.50	2.20	.0028	.0048	.0500	.0000	.70	.90	.0220	b
412	Feb. 21	Marked	V. much floc.	V. slight	0.1	17.10	9.00	.0000	.0096	1.2000	.0053	1.50	4.00	.....	b
413	Feb. 21	Marked	Floc.	Foul	0.25	6.90	2.40	.0078	.0064	.0000	.0000	.30	2.30	.....	g
414	Feb. 22	None	None	Slight grassy	0.0	5.40	3.00	.0020	.0074	.0000	.0000	.10	1.10	.....	g
415	Feb. 24	None	White floc.	None	0.0	13.60	6.00	.0010	.0020	.8000	.0001	.35	4.00	.....	g
416	Feb. 25	None	Floc.	V. slight	0.0	20.70	13.30	.0010	.0030	.8500	.0000	3.07	8.10	.....	b
417	Feb. 26	None	None	Foul	0.0	37.40	28.60	.0014	.0082	1.0500	.0001	1.70	14.40	.....	b
418	Feb. 27	None	None	Faint earthy	0.0	4.70	2.90	.0000	.0000	.0500	.0000	.20	1.40	.1030	b
419	Feb. 28	Slight	Floc. veg. etc	V. foul musty	0.0	20.70	16.40	.0310	.0130	.6000	.0037	2.50	6.10	.....	b
420	Mar. 3	None	None	None	0.0	12.00	7.30	.0000	.0014	.0600	.0001	.75	4.80	.....	g
421	Mar. 3	None	None	Earthy	0.2	3.90	.80	.0020	.0122	.0000	.0000	.05	2.40	.2000	b
422	Mar. 3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.20	.1600	b
423	Mar. 3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.20	.1100	b

* Iron, .1300.

† Distilled water.

‡ Ice.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
424	1902. Mar. 3												1.40	.0265	g
425	Mar. 3	None	Slight floc.	Earthy	0.1	11.50	5.60	.0000	.0038	.5000	.0001	.62	2.40	.....	g
426	Mar. 1	V. slight	V. slight	Earthy	0.0	21.20	13.80	.0030	.0148	.5000	.0000	4.17	5.10	.....	g
427	Mar. 3	None	V. slight min.	V. slight earthy	0.05	8.80	7.10	.0010	.0000	.0800	.0000	.52	1.90	.....	g
428	Mar. 3	Marked	Much sand	Slight foul	0.2	21.50	13.10	.0088	.0088	.9000	.0010	1.57	5.70	.....	b
429	Mar. 3	None	V. slight	None	0.2	13.80	9.20	.0012	.0144	.2000	.0000	1.42	4.40	.....	d
430	Mar. 4	None	None	Slight earthy	0.0	15.10	8.30	.0000	.0024	.3000	.0000	2.28	4.10	.....	b
431	Mar. 4	None	None	None	0.05	72.80	62.60	.0020	.0074	1.8500	.0000	6.26	29+	.....	b
432	Mar. 5	Slight	Slight	Veg.	0.4	6.90	1.70	.0090	.0144	.0000	.0002	.15	1.90	.....	*g
433	Mar. 5	V. slight	Slight	None	0.0	14.70	9.80	.0000	.0126	.0650	.0000	.45	3.90	.....	g
434	Mar. 5	None	Slight floc.	None	0.0	5.60	3.30	.0000	.0000	.0400	.0000	.63	1.20	.8000	b
435	Mar. 6	Marked	Fine sed.	Decided foul	0.4	8.50	2.00	.0108	.0226	.0050	.0003	.10	2.30	.....	†d
436	Mar. 6	None	None	V. slight	0.0	13.30	9.30	.0000	.0000	.0000	.0000	.17	5.80	.0000	g
437	Mar. 6	Marked	Fine sed.	Decided veg.	0.3	7.70	4.30	.0010	.0126	.0200	.0000	.06	1.80	.0000	g
438	Mar. 8	None	None	None	0.0	.....	.....	.....	.....	.0000	.0000	.08	.....	.4400	b
439	Mar. 10	Slight	None	Slight musty	0.0	40.30	27.00	.0068	.0050	3.0000	.0020	1.62	7.70	.....	b
440	Mar. 12	None	None	Veg.	0.0	3.60	2.10	.0000	.0000	.0150	.0000	.05	1.20	.0940	d
441	Mar. 11	None	None	None	0.0	27.50	19.80	.0006	.0032	.8000	.0000	3.20	6.70	.....	d
442	Mar. 11	Slight	Floc.	Flat	0.0	2.10	.20	.0098	.0054	.0000	.0000	.05	.10	.0000	†g
443	Mar. 12	Slight	None	Slight earthy	0.1	10.30	5.80	.0056	.0066	.2200	.0000	1.46	2.60	.....	b
444	Mar. 13	Slight	Floc. veg.	Veg.	0.3	9.10	2.20	.0018	.0076	.0100	.0000	.04	1.10	.....	g
445	Mar. 14	Slight	None	Slight earthy	0.0	12.00	6.10	.0006	.0024	.0700	.0000	.20	3.30	.....	g
446	Mar. 14	None	None	None	0.0	28.80	19.40	.0010	.0054	1.2000	.0003	6.10	9.00	.....	b
447	Mar. 17	None	None	None	0.0	.....	.....	.....	.....	.....	.....	.60	.0250	.....	g
448	Mar. 20	None	Floc. veg.	Decided veg.	0.25	3.30	2.40	.0010	.0092	.0150	.0000	.15	1.40	.....	g
449	Mar. 22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.32	1.50	.0800	b
450	Mar. 22	Marked	None	Faint earthy	0.15	2.90	1.50	.0010	.0060	.2500	.0000	.23	1.50	.....	g
451	Mar. 21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0240	.....	g
452	Mar. 24	Slight	Slight floc.	Slight	0.1	.....	.....	.....	.....	.0000	.0000	.12	.10	.1800	b
453	Mar. 24	None	None	None	0.0	.....	.....	.....	.....	.0000	.0000	.11	1.20	.0050	g
454	Mar. 25	Marked	Slight	Musty veg.	0.45	4.50	1.70	.0020	.0128	.0000	.0000	.14	1.40	.....	g
455	Mar. 27	Slight	Slight	Veg.	0.23	1.60	.70	.0010	.0122	.0150	.0000	.07	.70	.....	g
456	Mar. 27	Slight	Slight	Veg.	0.23	2.00	1.00	.0020	.0076	.0000	.0000	.07	.70	.....	g

* Water from cistern.

† Cistern water.

‡ Distilled water.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
	1902.														
457	Mar. 27	Slight	Slight	Veg.	0.32	3.10	.80	.0000	.0052	.0000	.0000	.07	.60	.....	g
458	Mar. 27	Marked	Slight	Veg.	0.12	2.10	.80	.0010	.0078	.0000	.0000	.11	.60	.....	g
459	Mar. 28	None	Slight floc.	None	0.0	20.60	12.50	.0018	.0092	1.6000	.0001	1.78	7.10	.....	b
460	Mar. 31	Marked	None	V. foul, musty	0.1	26.80	20.20	1.6000	.0550	.3000	.0020	1.56	6.40	.....	b
461	Apr. 2	None	None	Slight foul	0.0	5.20	3.50	.0016	.0024	.0100	.0000	.21	2.40	.....	g
462	Apr. 1	Marked	None	Foul	*	13.90	9.10	.0000	.0032	.4000	.0000	2.00	3.10	.....	b
463	Apr. 3	None	None	Veg.	0.0	8.40	5.50	.0000	.0026	.0100	.0000	.50	3.30	.0280	d
464	Apr. 3	None	None	V. slight	0.0	10.40	6.50	.0000	.0038	.5500	.0000	.85	4.00	.0000	g
465	Apr. 7	None	Much floc.	Veg.	0.0	3.20	2.10	.0028	.0028	.0000	.0003	.15	1.50	.0000	g
466	Apr. 5	None	None	V. slight	0.0	9.90	3.50	.0000	.0066	.2100	.0080	.90	3.50	.....	b
467	Apr. 11	Slight	Slight	V. slight	0.0	12.30	5.60	.0000	.0000	.9500	.0000	.95	3.70	.....	g
468	Apr. 11	None	None	V. slight	0.0	6.30	3.50	.0000	.0080	.0150	.0000	.15	1.40	.0450	d
469	Apr. 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0000	g
470	Apr. 14	None	V. slight	Slight earthy	0.0	31.00	26.90	.0020	.0024	.2500	.0000	12.50	3.20	.....	d
471	Apr. 14	Marked	Slight	Foul	0.1	6.00	3.80	.0014	.0106	.1500	.0034	.45	2.40	.....	b
472	Apr. 15	None	None	Slight earthy	0.0	4.40	2.40	.0020	.0038	.5000	.0000	.22	2.40	.....	g
473	Apr. 15	None	None	None	0.0	19.10	14.00	.0010	.0024	1.3000	.0000	2.04	4.10	.0000	†b
474	Apr. 17	None	None	None	0.0	7.00	4.40	.0000	.0010	.0600	.0000	.16	2.20	.0515	b
475	Apr. 18	Slight	Slight veg.	Slight foul	0.0	22.20	13.30	.0070	.0038	1.4000	.0192	2.00	4.50	.....	b
476	Apr. 17	None	Slight	Slight	0.0	28.00	19.60	.0026	.0136	1.8000	.0000	1.50	4.40	.....	b
477	Apr. 18	None	Slight	None	0.0	7.00	1.80	.0000	.0034	.0200	.0001	.07	1.40	.5400	b
478	Apr. 21	Slight	Slight floc.	Slight earthy	0.15	9.40	7.40	.0008	.0022	.0000	.0022	1.52	2.90	.....	b
479	Apr. 22	None	Floc.	None	0.0	3.00	2.10	.0016	.0056	.0000	.0000	.05	2.60	.....	g
480	Apr. 21	None	Slight veg. floc.	Slight veg.	0.4	6.90	2.50	.0016	.0146	.0000	.0000	.14	2.20	.0000	g
481	Apr. 21	None	Slight	Slight	0.0	24.20	19.10	.0060	.0058	1.5000	.0001	1.50	7.00	.....	b
482	Apr. 22	None	Earthy	Slight foul	0.5	11.70	8.70	.0038	.0046	.6000	.0001	1.09	2.20	.....	b
483	Apr. 22	None	Fine sed.	Slight	0.5	18.40	12.20	.0028	.0064	.8000	.0000	1.55	5.70	.....	b
484	Apr. 22	None	Much veg.	None	0.0	12.00	7.80	.0000	.0024	.4800	.0001	1.70	1.60	.....	d
485	Apr. 22	Slight	Much floc.	Foul sewage	0.6	44.00	28.80	2.0000	.0900	2.3000	.0240	5.50	6.70	.....	b
486	Apr. 22	None	None	None	0.0	15.40	10.20	.0000	.0028	.3000	.0000	3.89	2.70	.....	d
487	Apr. 22	None	None	None	0.0	16.80	14.50	.0000	.0000	.5500	.0000	1.56	3.70	.....	g
488	Apr. 23	None	None	Slight earthy	0.05	7.80	4.20	.0000	.0000	.1200	.0000	.42	2.20	.....	g
489	Apr. 23	None	None	Slight	0.0	6.80	1.90	.0010	.0000	.0000	.0000	.10	1.80	.0000	g

* Milky.

† B. Coli Communis present.

Analyses of Water Supplies. — Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA	NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.	
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.		Free.	Albuminoid.					Nitrates.	Nitrites.
496	1902. Apr. 26	None	None	None	0.01	.....	.....	.0000	.0012	.0000	.0000	.07	.90	.2770	b
491	Apr. 25	None	None	Slight	0.0	13.70	8.50	.0000	.0000	.0000	.0000	.37	5.00	.....	g
492	Apr. 26	V. slight	None	Decided foul veg.	0.2	5.80	1.20	.0000	.0084	.0000	.0000	.08	.90	.....	g
493	Apr. 28	None	None	Veg.	0.1	14.20	7.50	.0000	.0112	.5500	.0020	1.34	2.90	.....	b
494	May 3	None	None	None	0.0	28.60	17.50	.0006	.0040	1.1000	.0000	2.60	5.70	.....	d
495	May 4	V. slight	None	Decided veg.	0.55	3.50	1.70	.0000	.0098	.0000	.0000	.05	1.60	.....	g
496	May 4	None	Slight floc.	Foul	0.0	11.10	3.90	.0018	.0058	.5500	.0000	.68	3.50	.....	g
497	May 5	None	None	Veg.	0.5	4.00	1.90	.0006	.0056	.0200	.0000	.15	1.20	.....	g
498	May 5	None	None	None	0.0	9.70	5.60	.0026	.0034	.0800	.0000	.40	2.00	.....	g
499	May 5	Slight	None	Slight veg.	0.0	7.60	4.50	.0000	.0026	.2500	.0000	.70	1.95	.....	g
500	May 5	Marked	None	Marked stable	0.3	7.80	2.10	.0036	.0148	.0700	.0000	.40	1.60	.....	b
501	May 5	None	None	None	0.02	10.40	6.50	.0028	.0086	.2000	.0000	.80	3.70	.....	g
502	May 6	None	Sand	Slight veg.	0.0	3.40	1.40	.0000	.0030	.0200	.0002	.06	1.40	.2000	b
503	May 5	Slight	Much floc.	Slight musty	0.0	8.70	4.50	.0000	.0080	.3500	.0000	.75	2.20	.....	g
504	May 6	Marked	Slight	Decided foul	0.3	12.30	7.70	.0028	.0232	.1900	.0000	.17	2.20	.....	d
505	May 6	Slight	Slight	Foul	0.0	11.60	7.30	.0034	.0042	.4500	.0001	1.05	2.30	.....	d
506	May 6	Slight	None	None	0.0	6.80	4.10	.0012	.0038	.0250	.0000	.20	2.30	.....	g
507	May 6	None	None	None	0.0	49.20	34.10	.0000	.0052	1.1000	.0000	14.74	9.00	.....	b
508	May 6	None	None	None	0.0	8.10	5.80	.0000	.0030	.0000	.0000	.06	4.10	.0000	g
509	May 5	None	None	Marked veg.	0.5	43.20	21.70	.0320	.0406	1.5500	.0038	5.5	7.75	.....	b
510	May 5	None	None	None	0.0	13.00	9.20	.0010	.0026	.5500	.0000	.72	4.20	.....	g
511	May 6	None	Slight sand	None	0.0	.....	.....	.....	.....	.....	.....	.06	.....	.0650	d
512	May 9	None	None	None	0.0	5.20	3.50	.....	.....	.2200	.0000	.34	1.90	.0550	d
513	May 8	Marked	Much floc.	Foul	0.0	5.60	3.50	.0088	.0046	.1200	.0000	.75	1.90	.....	b
514	May 12	None	Fibrous	Slight earthy	0.0	6.30	3.60	.0000	.0032	.0900	.0000	.45	1.50	.....	g
515	May 12	None	None	None	0.0	16.20	10.30	.0000	.0024	.8100	.0000	1.64	4.00	.....	d
516	May 12	None	None	Slight veg.	0.0	8.40	5.70	.0000	.0000	.0600	.0000	.31	2.30	.0000	g
517	May 12	None	None	None	0.0	4.70	1.70	.0014	.0006	.0750	.0000	.09	.60	.0580	d
518	May 12	None	None	None	0.0	5.60	3.40	.0130	.0014	.3000	.0000	.25	2.30	.....	g
519	May 12	V. slight	None	Slight aromat.	0.0	14.50	8.40	.0024	.0060	.3500	.0001	2.06	4.40	1.1000	b
520	May 13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.2900	b
521	May 13	Slight	None	None	0.0	61.40	58.30	.0000	.0012	.1800	.0011	.90	4.80	3.3000	b
522	May 12	None	None	None	0.0	5.00	3.70	.0000	.0020	.0001	.0000	.27	3.70	.....	g
523	May 13	None	None	Slight aromat.	0.0	3.30	2.10	.0000	.0000	.0300	.0034	.21	1.10	.2600	b

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
524	1902. May 13	None	None	None	0.0	3.40	1.80	.0016	.0020	.0300	.0000	.17	1.10	.0610	b
525	May 14	None	None	None	0.0	.....	.....	.....	.....	.....	.....	.....	.....	.3250	b
526	May 15	V. slight	V. slight	None	0.05	15.50	10.50	.0000	.0024	.3200	.0000	1.14	6.00	.....	g
527	May 15	None	Much floc.	Foul	0.0	36.80	32.00	.0008	.0146	1.4500	.0008	3.09	8.20	.....	b
528	May 14	None	V. slight	Foul	0.0	23.00	16.50	.0020	.0028	.8000	.0003	4.59	3.90	.....	b
529	May 16	None	None	Slight foul	0.0	17.70	13.00	.0016	.0114	.4000	.0170	1.31	4.80	.....	b
530	May 16	None	None	Slight	0.0	7.90	3.40	.0000	.0032	.1100	.0000	.65	2.90	.....	g
531	May 19	None	V. slight	Slight veg.	0.05	3.20	.90	.0000	.0064	.0000	.0000	.13	.60	.....	g
532	May 19	None	V. slight	Slight veg.	0.1	2.80	.90	.0000	.0114	.0000	.0000	.13	.60	.....	g
533	May 18	Marked	V. slight	Slight	0.0	60.50	52.70	.0000	.0114	2.0000	.0001	10.18	5.10	.....	b
534	May 19	None	None	None	0.0	8.30	6.60	.0006	.0024	.1900	.0000	.49	4.40	.....	g
535	May 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0750	g
536	May 21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0000	g
537	May 16	None	None	None	0.0	20.70	16.20	.0030	.0064	.7500	.0020	3.95	4.80	.....	b
538	May 10	None	None	None	0.0	18.50	11.30	.0052	.0034	.7000	.0006	1.27	7.40	.....	b
539	May 20	V. slight	None	Slight foul	0.0	9.10	4.50	.0000	.0010	.3200	.0000	.45	2.80	.....	g
540	May 21	None	None	None	0.0	18.00	13.00	.0006	.0016	.3600	.0000	1.81	6.40	.....	g
541	May 20	Marked	V. slight	None	0.0	24.20	14.70	.0000	.0064	.3100	.0003	6.25	4.20	.....	b
542	May 20	None	None	None	0.0	5.20	3.20	.0000	.0000	.0400	.0003	.06	2.30	.....	g
543	May 20	None	None	None	0.0	5.20	2.50	.0000	.0000	.0900	.0001	.06	2.30	.....	g
544	May 21	None	Floc. veg.	None	0.0	18.30	13.00	.0046	.0168	.1000	.0001	3.70	2.70	.....	b
545	May 19	Marked	None	Decided veg.	0.2	6.00	2.50	.0032	.0068	.0050	.0000	.11	2.00	.0600	b
546	May 22	Marked	Slight floc.	Strong oily	0.0	16.50	10.00	.0000	.0038	.5000	.0002	1.54	4.50	.....	g
547	May 22	None	Floc. veg.	V. slight	0.05	25.70	19.70	.0306	.0084	1.4500	.0006	2.64	3.10	.....	b
548	May 21	None	Slight	V. foul	0.30	18.70	10.00	.0460	.0194	.7600	.0028	1.18	4.00	.....	b
549	May 24	None	None	V. slight aromat.	0.0	12.00	8.90	.0000	.0146	.4000	.0000	1.18	4.10	.....	b
550	May 23	None	None	V. slight foul	0.0	4.30	2.00	.0018	.0028	.1000	.0003	.27	1.90	.....	g
551	May 23	Marked	V. much floc.	Decided veg.	0.0	5.20	4.00	.0008	.0026	.1200	.0000	.29	1.80	.....	g
552	May 23	V. slight	Consid. fine sed.	None	0.0	7.60	4.50	.0026	.0018	.2300	.0000	.34	1.60	.....	g
553	May 26	None	None	Slight veg.	0.0	5.50	2.10	.0000	.0026	.2000	.0002	.34	1.60	.0700	b
554	May 26	Slight	Slight floc.	V. slight veg.	0.0	4.30	2.50	.0000	.0000	.0000	.0000	.11	1.40	.....	g
555	May 28	Slight	Slight floc.	V. slight veg.	0.1	6.50	2.30	.0000	.0110	.0000	.0000	.09	2.10	.....	g
556	May 28	None	V. slight	None	0.0	3.40	1.50	.0000	.0032	.0600	.0000	.06	1.50	.....	g
557	May 28	Consid. whitish	Much floc veg.	Earthy	0.0	5.60	1.50	.0000	.0000	.0000	.0000	.13	.90	.....	g

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
558	1902. May 29	None	None	None	0.0	.....	.....	.....	.....	.3100	.0000	.45	2.30	.2000	b
559	May 29	Marked	Slight	Slight foul	0.1	24.10	17.90	.0046	.0130	1.0500	.0017	2.68	3.90	.....	b
560	May 29	Marked	Much min.	Slight foul	0.05	11.30	6.70	.0046	.0600	.7500	.0005	.47	3.50	.....	d
561	May 29	None	None	Slight foul	0.0	6.30	2.80	.0000	.0020	.0300	.0000	.15	2.30	.0130	g
562	June 2	Slight	Much floc.	Marked foul	0.0	7.60	5.60	.0000	.0152	.1200	.0011	.45	2.60	.....	b
563	June 2	Slight	Slight	Slight	0.0	5.20	3.60	.0000	.0024	.0400	.0000	.09	1.90	.....	g
564	June 2	V. slight	Slight	None	0.0	7.40	4.50	.0000	.0034	.3100	.0000	.81	2.30	.....	g
565	June 2	V. slight	Slight	None	0.0	4.60	2.70	.0010	.0010	.0150	.0000	.13	1.80	.....	g
566	May 31	None	None	None	0.0	9.00	4.00	.0000	.0022	.2900	.0000	.59	3.10	.....	g
567	June 2	Slight	Slight	Slight	0.0	36.40	24.40	.0082	.0016	1.9000	.0034	6.04	6.80	.....	b
568	June 2	V. slight	Much fine white	Decided	0.0	20.00	11.00	.0018	.0014	1.2000	.0077	3.04	5.50	.....	b
569	June 2	Slight	Consid. floc.	Slight foul	0.2	7.10	2.30	.0072	.0038	.1500	.0012	.36	2.20	.....	b
570	June 4	None	None	None	0.0	3.80	1.90	.0000	.0000	.0000	.0000	.13	.40	.....	g
571	June 2	None	None	Slight	0.0	26.20	16.90	.0000	.0012	1.3000	.0000	2.27	7.40	.....	d
572	June 1	None	None	V. slight	0.0	4.70	2.70	.0000	.0014	.1300	.0000	.22	2.30	.1400	b
573	June 5	V. slight	Slight	Decided veg.	0.25	7.30	2.00	.0000	.0052	.0180	.0000	.09	1.90	.....	g
574	June 9	None	None	V. slight earthy	0.0	18.30	6.70	.0000	.0024	.2900	.0000	1.77	4.00	.....	d
575	June 9	None	None	Slight foul	0.0	11.90	3.90	.0000	.0026	.6000	.0000	.77	3.90	.....	g
576	June 9	None	V. slight	Decided aromat.	0.0	12.80	6.90	.0018	.0042	.0700	.0000	1.02	3.60	.....	g
577	June 9	None	None	None	0.0	10.20	7.60	.0014	.0010	.4300	.0000	.77	2.20	.0880	b
578	June 10	None	V. slight	Decided foul	0.0	12.20	7.00	.0018	.0058	.1900	.0000	1.22	3.50	.0000	g
579	June 9	None	None	Slight aromat.	0.0	49.50	31.20	.0000	.0060	2.9000	.0001	4.09	8.10	.....	b
580	June 9	None	V. slight	Slight aromat.	0.0	50.00	36.10	.0000	.0034	1.6000	.0010	7.95	11.20	.....	b
581	June 8	None	None	None	0.0	5.90	4.20	.0030	.0028	.0600	.0000	.25	1.80	.0260	g
582	June 10	Very milky	Much	Slight oily	0.0	10.70	6.60	.0008	.0018	.0300	.0002	.34	1.40	.1020	b
583	June 9	None	None	None	0.0	5.70	2.90	.0034	.0020	.1600	.0000	.59	1.50	.....	g
584	June 10	Slight	Slight floc.	Mucky	0.1	.....	.....	.....	.....	.0100	.0000	.11	2.70	.0000	g
585	June 11	None	None	Slight veg.	0.55	6.60	1.50	.0000	.0092	.0200	.0000	.14	1.20	.....	g
586	June 12	V. slight	None	None	0.0	9.70	5.10	.0010	.0018	.4500	.0003	.45	2.60	.....	d
587	June 13	None	None	None	0.0	10.80	6.30	.0012	.0000	.1900	.0000	.51	4.20	.....	g
588	June 13	None	None	Slight veg.	0.0	16.10	14.30	.0010	.0058	1.6100	.0007	1.31	6.20	.....	b
589	June 13	V. slight	None	V. slight	0.0	7.40	3.60	.0012	.0000	.0700	.0000	.21	2.20	.....	g
590	June 13	None	Slight floc	None	0.0	14.30	6.50	.0000	.0030	.5100	.0000	1.11	2.90	.....	g
591	June 13	V. slight	Slight	Decided veg.	0.15	5.30	1.50	.0016	.0146	.0000	.0000	.11	.70	.....	g

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
592	1902. June 13	V. slight	Slight	Decided veg.	0.1	6.20	1.60	.0000	.0124	.0000	.0000	.11	.70	.....	g
593	June 13	V. slight	V. slight	Slight	0.15	5.50	2.10	.0006	.0072	.0000	.0000	.11	.70	.....	g
594	June 13	V. slight	V. slight	Veg.	0.15	6.10	1.70	.0006	.0126	.0000	.0000	.11	.70	.....	g
595	June 13	V. slight	V. slight	Veg.	0.15	6.70	1.70	.0006	.0108	.0000	.0000	.12	.70	.....	g
596	June 13	None	None	Veg.	0.15	6.20	1.60	.0000	.0112	.0000	.0000	.11	.70	.....	g
597	June 16	None	None	None	0.0	3.80	2.20	.0000	.0010	.0003	.0000	.09	2.20	.0000	g
598	June 16	Slight	V. slight	Slight	0.1	8.90	5.90	.0000	.0132	.1200	.0000	.09	2.60	.....	g
599	June 16	None	None	None	0.0	7.50	5.60	.0000	.0010	.1000	.0000	.31	1.50	.....	g
600	June 16	None	None	Slight veg.	0.25	5.00	2.20	.0012	.0046	.0000	.0000	.09	1.80	.....	g
601	June 15	None	None	Decided	0.0	57.30	30.00	.0000	.0100	.3000	.0032	8.58	9.40	.5400	b
602	June 16	None	Slight fibrous	Slight veg.	0.0	21.80	17.10	.0000	.0028	1.0200	.0001	2.82	5.80	.....	b
603	June 17	None	None	Slight	0.0	4.30	2.90	.0014	.0000	.0100	.0000	.09	.70	.....	g
604	June 18	Slight	Slight	Decided veg	0.3	9.20	2.70	.0000	.0136	.1100	.0000	.18	.70	.....	g
605	June 18	.....	.....	.....	.....	.....	.....	.....	.....	.0001	.....	.....	.....	.2300	b
606	June 19	None	None	None	0.0	11.10	7.30	.0000	.0000	.1800	.0000	1.59	3.10	.....	g
607	June 19	Marked milky	None	None	0.0	11.00	5.20	.0000	.0000	.0600	.0000	.18	3.20	.....	g
608	June 20	None	Slight	None	0.0	2.10	1.80	.0000	.0000	.1100	.0000	.54	1.80	.....	g
609	June 23	None	None	Decided veg.	0.0	15.80	9.10	.0000	.0000	.5000	.0002	1.62	4.10	.1000	b
610	June 23	None	None	None	0.0	12.10	8.90	.0000	.0034	.2000	.0001	.37	3.90	.....	g
611	June 23	None	None	Musty	0.0	15.80	7.10	.0000	.0014	.9100	.0011	.50	4.40	.....	g
612	June 23	None	None	None	0.0	11.30	6.90	.0020	.0000	.5000	.0002	.80	3.20	.0300	g
613	June 23	Marked	Much veg.	Foul	0.0	13.40	7.80	.0234	.0066	.2100	.0012	.90	3.50	.....	b
614	June 25	V. slight	V. slight	Aromat. veg.	0.2	7.00	2.60	.0006	.0082	.0330	.0000	.12	1.80	.....	g
615	June 25	None	None	Decided foul	0.1	26.50	17.50	.2280	.0164	1.0100	.0116	2.62	5.00	.....	b
616	June 24	Marked	Much red. floc.	Very foul	0.7	23.60	17.10	.0230	.0074	.1930	.0027	1.97	6.00	.....	b
617	June 26	V. slight	V. slight	Veg.	0.0	4.20	2.10	.0000	.0044	.0030	.0000	.12	1.50	.....	g
618	June 26	None	None	Foul	0.1	28.10	19.60	.0058	.0010	1.2000	.0005	2.30	7.70	.....	b
619	June 27	None	None	V. slight	0.0	8.50	5.90	.0000	.0000	.1100	.0000	.52	3.90	.....	g
620	June 27	None	None	None	0.0	8.20	3.60	.0000	.0000	.2100	.0000	.32	2.00	.....	g
621	June 27	None	Slight floc.	Slight aromat.	0.0	10.40	8.80	.0000	.0018	.0150	.0000	.27	4.50	.....	g
622	June 13	None	Floc.	Slight	0.0	7.00	4.40	.0000	.0010	.1400	.0000	.07	2.20	.....	g
623	June 30	None	None	V. slight foul	0.0	7.00	4.20	.0010	.0000	.0200	.0004	.36	3.70	.1050	b
624	June 30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0460 *b

* After standing twelve hours in pipe, lead, .1800.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
625	1902. June 29	Marked	Much red floc.	None	0.4	10.40	6.10	.0000	.0070	.0000	.0000	.30	2.30	.....	*b
626	June 30	None	None	None	0.0	19.50	10.90	.0000	.0014	.5000	.0002	.68	7.70	.....	g
627	June 30	V. slight	None	Veg.	0.25	8.00	3.10	.0000	.0054	.0000	.0000	.10	2.30	.....	g
628	June 30	None	None	None	0.0	9.20	3.70	.0000	.0000	.0000	.0000	.30	3.50	.....	g
629	June 30	Slight	Slight	Veg.	0.26	7.80	3.10	.0006	.0084	.0000	.0000	.12	2.30	.....	g
630	June 30	Slight	Slight	Decided veg.	0.26	8.10	3.00	.0006	.0120	.0000	.0000	.07	1.90	.....	g
631	June 30	Slight	None	Decided veg.	0.26	6.40	2.50	.0000	.0072	.0000	.0000	.07	1.90	.....	g
632	June 30	None	None	None	0.0	12.90	8.80	.0010	.0098	.3000	.0000	.25	4.00	.0000	g
633	July 2	Marked	None	Strong aromat.	1.3	23.80	15.60	.0112	.0280	.0000	.0054	.20	10.70	.....	b
634	July 2	None	None	None	0.05	26.10	17.30	.1340	.0176	.1800	.0007	4.55	5.20	.....	b
635	July 7	Slight	Slight	None	0.35	9.80	2.10	.0000	.0092	.0300	.0003	.17	2.00	.....	g
636	July 7	None	None	Foul	0.1	25.90	15.10	.0000	.0084	.1200	.0001	1.60	6.20	.....	d
637	July 7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.10	.....	.0490	d
638	July 9	None	None	V. slight	0.2	11.30	6.90	.0000	.0128	.2600	.0000	1.05	3.20	.....	d
639	July 9	None	None	None	0.0	8.30	5.30	.0006	.0000	.1000	.0000	.47	3.50	.....	g
640	July 10	None	None	Foul	0.0	6.60	3.20	.0018	.0010	.0000	.0000	.17	2.80	.....	g
641	July 9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0960	d
642	July 10	None	None	Slight	0.0	14.50	9.90	.0009	.0000	.8000	.0001	1.20	3.20	.0710	b
643	July 10	None	None	None	0.0	10.40	6.70	.0000	.0000	.3900	.0018	.70	3.20	.3400	b
644	July 10	Slight	Floc.	V. slight	0.0	14.60	9.70	.0000	.0026	.3100	.0002	1.30	3.30	.....	b
645	July 11	Slight	Much floc. veg.	Foul oily	0.0	41.20	29.40	.0030	.0018	.9000	.0080	6.50	10.00	.....	b
646	July 14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0000	.....	.40	.3000	b
647	July 14	None	None	Decided veg.	0.6	4.70	2.20	.0000	.0098	.0200	.0000	.14	1.80	.....	g
648	July 14	V. slight	None	None	0.0	10.80	6.10	.0000	.0026	.0600	.0000	1.06	3.60	.....	g
649	July 14	None	V. slight	None	0.0	32.80	22.90	.0000	.0000	.2100	.0000	8.85	7.50	.....	b
650	July 14	None	None	None	0.0	13.90	6.80	.0000	.0044	.0150	.0000	1.60	2.40	.....	g
651	July 15	Marked	None	Very of- fensive	0.0	7.80	4.30	.0080	.0000	.2600	.0000	1.30	2.40	.....	d
652	July 16	None	None	None	0.0	.....	.....	.0320	.0060	.0700	.0020	.....	.....	.....	d
653	July 16	None	None	V. slight	0.0	5.40	3.10	.0000	.0000	.0000	.0000	.12	1.20	.....	g
654	July 16	None	None	Slight earthly	0.0	7.50	4.40	.0000	.0024	.0600	.0001	.30	2.30	.....	g
655	July 16	None	V. slight	None	0.0	8.20	4.20	.0000	.0018	.0000	.0000	.12	3.90	.....	g
656	July 17	None	Brownish floc.	None	0.0	1.60	1.70	.0000	.0000	.0250	.0000	.10	.30	.0000	g
657	July 17	None	V. slight	V. slight	0.5	6.10	2.20	.0020	.0154	.0200	.0000	.15	2.20	.....	g

* Iron, .2200.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitriles.				
658	1902. July 16	None	Much fine	None	0.0	4.30	2.10	.....	.....	.0000	.0000	.15	.60	.....	g
659	July 17	None	None	None	0.0	.....	.....	.....	.....	.0300	.0000	.15	5.50	.3400	b
660	July 18	None	None	Very of- fensive	0.0	20.00	14.80	.0160	.0146	.2800	.0058	2.55	5.20	.....	b
661	July 19	V. slight	Much floc. veg.	V. slight	0.05	5.50	1.40	.0000	.0020	.0000	.0000	.20	.60	.....	g
662	July 19	None	None	Decided foul	0.0	12.60	7.90	.0126	.0058	.2000	.0054	1.65	3.50	.4200	b
663	July 19	None	Slight	Slight	0.0	38.70	28.20	.0000	.0018	2.0000	.0003	4.87	7.40	.....	b
664	July 19	Slight	Much floc.	Decided	0.3	6.40	1.30	.0048	.0260	.0000	.0000	.20	1.20	.....	g
665	July 22	None	None	Slight foul	*	9.00	3.10	.0000	.0014	.2200	.0000	.15	2.50	.0800	b
666	July 22	None	None	Slight	0.1	16.50	10.60	.0000	.0072	.3200	.0003	1.20	5.50	.....	d
667	July 23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.0940	b
668	July 24	None	None	Slight	0.0	15.80	8.80	.0000	.0034	.2700	.0000	1.11	5.40	.....	g
669	July 25	None	Fine reddish	Slight aromat.	0.0	9.40	5.70	.0000	.0016	.0000	.0000	.20	3.20	.0000	g
670	July 25	None	None	None	0.0	26.80	13.40	.0000	.0000	2.0000	.0001	1.66	6.20	.....	b
671	July 25	None	None	None	0.0	13.80	10.00	.0000	.0000	.3000	.0000	.15	1.50	.0000	g
672	July 26	None	None	None	0.0	22.30	11.90	.0000	.0000	4.8000	.0000	3.55	4.80	.....	b
673	July 26	None	None	Slight foul	0.0	13.30	5.20	.0014	.0016	.1800	.0000	.50	2.00	.....	g
674	July 27	None	None	None	0.0	16.20	10.20	.0000	.0026	.2800	.0015	.90	5.40	.....	b
675	July 29	None	None	Slight veg.	0.0	.....	.....	.....	.....	.0200	.0000	.15	2.30	.0460	d
676	July 29	None	None	None	0.0	18.50	6.10	.....	.....	.1200	.0000	.75	5.50	.....	g
677	July 29	None	None	None	0.0	17.00	9.00	.0000	.0000	.2000	.0000	.50	2.40	.....	g
678	July 30	None	None	None	0.0	19.50	13.40	.0000	.0040	.8200	.0000	.85	5.40	.....	d
679	July 30	None	None	Slight	0.0	19.90	9.40	.0000	.0020	.0900	.0000	.35	7.00	.....	g
680	July 29	None	None	Slight foul	0.0	36.10	24.50	.0000	.0014	1.1000	.0000	3.65	9.20	.....	† b
681	July 29	None	Slight	None	0.0	9.90	5.50	.0000	.0052	.0000	.0000	.10	4.70	.....	† g
682	July 30	Marked	Much	Decided	1.0	13.60	7.60	.0000	.0146	.0000	.0000	.10	1.60	.....	§ b
683	July 30	Marked	Much	Parsnip- like	0.4	15.60	5.00	.0024	.0380	.0000	.0000	1.50	2.40	.....	¶ b
684	July 30	Marked	Much iron oxid	Peculiar	3.0	13.10	12.40	.1000	.0088	.0070	.0000	.37	6.40	.0000	*** b
685	July 30	None	None	Slight foul	0.0	6.60	4.20	.0034	.0044	.0400	.0033	.27	4.20	.....	g
686	Aug. 4	Slight	Slight floc.	V. decid. veg.	0.5	4.90	1.40	.0000	.0098	.0000	.0000	.07	1.40	.....	g
687	Aug. 4	Marked	Floc.	Veg.	0.5	4.00	1.50	.0000	.0066	.0000	.0000	.07	1.50	.....	g
688	Aug. 4	None	None	None	0.0	6.40	4.20	.0000	.0000	.0600	.0000	.45	2.68	.....	g
689	Aug. 4	None	None	V. slight	0.0	.....	.....	.....	.....	.1800	.0000	.40	1.80	.0780	d
690	Aug. 2	None	None	None	0.0	12.40	7.20	.0000	.0000	.4200	.0002	1.05	3.60	.....	d

* Bluish.

† Iron, .0150.

¶ Iron, .1000.

‡ Iron, .0250.

** Iron, .8400.

§ Iron, .2700.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
691	1902. Aug. 4	None	None	None	0.0	3.90	2.20	.0000	.0000	.0200	.0000	.10	1.80	.0190	g
692	Aug. 2	None	None	None	0.0	17.30	11.60	.0022	.0050	.0350	.0000	2.95	3.70	.....	g
693	Aug. 5	None	None	None	0.0	.....	.....	.....	.....	.0000	.0000	.10	1.60	.1020	b
694	Aug. 5	None	None	V. slight	0.0	4.40	3.70	.0000	.0000	.0150	.0000	.10	2.30	.0280	g
695	Aug. 5	None	None	None	0.0	5.80	4.50	.0026	.0000	.0980	.0000	.20	3.80	.....	g
696	Aug. 4	None	None	V. slight	0.0	.....	.....	.....	.....	.0400	.0000	.12	2.00	.1240	b
697	Aug. 5	None	None	None	0.0	5.30	3.20	.0000	.0000	.0330	.0000	1.25	1.90	.....	g
698	Aug. 6	None	None	None	0.0	.....	.....	.....	.....	.0100	.0000	.05	2.30	.1720	b
699	Aug. 8	Marked	Large mass	V. foul	0.3	10.70	3.70	.0016	.0222	.0000	.0000	.40	3.70	.....	g
700	Aug. 8	None	None	Slight	0.0	35.80	25.30	.0000	.0000	1.2000	.0019	2.82	8.10	.....	b
701	Aug. 8	None	None	V. slight	0.1	67.00	52.30	.0000	.0024	.9500	.0003	3.62	9.00	.....	b
702	Aug. 8	None	None	Slight	0.0	40.50	30.00	.0112	.0052	1.2000	.0002	9.70	10.70	.....	b
703	Aug. 9	None	None	None	0.0	.....	.....	.....	.....	.0000	.0000	.12	2.60	.3900	b
704	Aug. 9	None	Slight floc.	None	0.0	15.90	9.30	.0018	.0000	.1500	.0000	.85	7.00	.....	g
705	Aug. 8	None	None	None	0.0	17.40	10.00	.0000	.0000	.1500	.0000	.72	9.00	.....	g
706	Aug. 11	None	Slight floc.	None	0.0	.....	.....	.....	.....	.0300	.0000	.26	2.30	.....	g
707	Aug. 12	None	None	None	0.0	17.00	9.80	.0000	.0040	.5500	.0002	.45	5.50	.....	g
708	Aug. 12	Marked	Much red- dish floc.	Decided foul	0.3	11.00	5.70	.0054	.0032	.0000	.0000	.55	4.10	.....	*b
709	Aug. 12	None	Slight	None	0.0	9.50	3.40	.0000	.0000	.0300	.0000	.17	2.70	.0000	g
710	Aug. 12	V. slight	None	Peaty	0.0	10.90	5.80	.0000	.0014	.0400	.0000	.40	3.20	.1020	b
711	Aug. 13	Slight	Floc.	Foul	0.0	.....	.....	.....	.....	.0400	.0000	.15	1.90	.0180	g
712	Aug. 13	None	None	Slight veg.	0.0	3.50	2.40	.0000	.0018	.0200	.0000	.10	2.40	.0215	g
713	Aug. 14	None	None	Slight earthy	0.0	15.70	13.00	.0010	.0032	.6500	.0001	1.65	3.60	.....	d
714	Aug. 14	None	None	None	0.0	5.80	4.30	.0000	.0018	.0200	.0000	.20	2.40	.....	g
715	Aug. 14	None	None	None	0.0	16.90	8.90	.0000	.0018	.8300	.0006	.75	6.10	.....	b
716	Aug. 14	None	None	None	0.0	11.50	8.40	.0010	.0018	.3000	.0000	1.50	1.80	.....	g
717	Aug. 14	None	None	None	0.0	.....	.....	.....	.....	.0200	.0001	.10	1.40	.0720	b
718	Aug. 14	None	None	Slight foul	0.0	37.80	25.40	.0006	.0078	1.6500	.0001	2.00	9.10	.....	b
719	Aug. 14	Slight	None	Foul, oy- ster-like	0.0	5.50	2.70	.0010	.0082	.0000	.0000	.10	2.70	.....	g
720	Aug. 14	V. slight	V. slight floc.	None	0.0	16.00	8.30	.0012	.0102	.4800	.0008	1.75	4.20	.....	b
721	Aug. 16	None	None	None	0.0	.....	.....	.....	.....	.0000	.0000	.10	1.60	.0512	d
722	Aug. 18	None	None	Slight veg.	0.0	.....	.....	.....	.....	.0015	.0860	.10	6.20	.0860	b
723	Aug. 19	Slight	None	Decided veg	0.35	7.30	3.00	.0010	.0144	†	.0000	.30	2.30	.....	g

* Iron, .5800.

† Trace.

Analyses of Water Supplies.— Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
724	1902. Aug. 18	Marked milky	None	None	0.40	15.10	8.70	.0026	.0054	*	.0000	.10	2.70	.....	b
725	Aug. 19	None	None	None	0.0	32.20	24.70	.0010	.0026	1.8000	.0005	4.25	6.80	.....	b
726	Aug. 22	None	None	None	0.0	28.00	17.70	.0006	.0038	.8000	.0000	3.45	6.80	.....	d
727	Aug. 22	None	Floc. veg.	Veg.	0.35	7.40	1.30	.0000	.0106	.0000	.0000	.17	1.20	.....	g
728	Aug. 22	None	None	None	0.0	22.60	13.40	.0000	.0000	.6000	.0007	2.90	7.20	.....	d
729	Aug. 22	None	Floc.	Decided foul	0.0	12.70	7.80	.0096	.0020	.0000	.0000	.45	6.00	.....	d
730	Aug. 22	None	None	None	0.0	3.60	2.50	.0000	.0014	.0000	.0000	.25	2.40	.....	g
731	Aug. 22	V. slight	Slight floc.	Slight veg.	0.0	.....	.....	.....	.....	.0000	.0000	.07	1.50	.1600	b
732	Aug. 22	None	None	None	0.0	.....	.....	.....	.....	.0000	.0000	.06	1.60	.1780	b
733	Aug. 22	None	None	None	0.0	10.30	8.00	.0010	.0014	.1200	.0001	2.20	3.90	.....	g
734	Aug. 22	None	None	V. slight	0.0	22.20	12.70	.0000	.0000	.3000	.0000	2.80	4.70	.....	g
735	Aug. 22	None	Slight reddish	None	0.0	16.60	12.40	.0000	.0000	.1800	.0000	4.10	4.10	.....	g
736	Aug. 22	None	None	None	0.0	13.50	8.90	.0000	.0000	.2100	.0001	2.05	4.00	.....	g
737	Aug. 25	None	Veg.	Slight foul	0.0	6.60	3.10	.0050	.0316	.0700	.0003	.35	2.80	.0260	b
738	Aug. 24	Marked	Slight	Very foul	0.0	41.10	19.20	.0544	.0360	.9500	.0120	3.95	12.40	.....	b
739	Aug. 25	None	None	None	0.0	6.80	6.60	.0000	.0150	.0500	.0000	.17	6.50	.0390	d
740	Aug. 25	None	Slight	Slight aromat.	0.0	6.80	4.90	.0000	.0020	.3000	.0000	.15	4.70	.....	g
741	Aug. 25	None	None	Slight	0.0	60.00	43.30	.0000	.0470	4.5000	.0020	5.15	10.30	.....	b
742	Aug. 25	None	None	Slight	0.0	31.80	21.60	.0000	.0014	1.0200	.0003	2.55	9.00	.....	b
743	Aug. 25	None	None	V. slight	0.0	5.80	3.80	.0006	.0014	.0300	.0000	.40	3.80	.....	g
744	Aug. 25	None	None	Slight veg.	1.20	6.20	2.00	.0010	.0190	.0200	.0000	.15	1.90	.....	g
745	Aug. 26	None	None	None	0.0	5.90	4.50	.0000	.0000	.0100	.0000	.07	2.60	.....	g
746	Aug. 26	None	None	None	0.2	3.70	1.30	.0000	.0060	.0120	.0000	.12	1.20	.....	g
747	Aug. 26	None	V. slight	Slight veg.	0.15	3.90	1.50	.0016	.0050	.0000	.0000	.06	.40	.....	g
748	Aug. 26	None	None	Slight foul	0.0	18.70	15.00	.0000	.0000	1.1000	.0000	1.20	5.50	.....	d
749	Aug. 26	V. slight	Decid.floc. reddish	Marked veg.	0.5	7.80	2.89	.0000	.0202	.0900	.0000	.37	2.80	.....	g
750	Aug. 26	None	None	Slight veg.	0.0	6.00	1.50	.0000	.0000	.0000	.0000	.15	1.50	.....	g
751	Aug. 27	None	V. slight	None	0.15	6.50	2.80	.0000	.0000	.0000	.0000	.10	1.50	.....	g
752	Aug. 27	None	None	Slight	0.0	47.10	34.70	.0066	.0020	3.1000	.0008	6.85	10.10	.....	b
753	Aug. 27	None	None	None	0.0	12.40	8.70	.0000	.0000	.0200	.0000	.12	3.90	.....	g
754	Aug. 29	None	None	V. slight	0.3	5.30	2.00	.0000	.0110	.0000	.0000	.10	1.50	.....	g
755	Aug. 29	None	None	Slight musty	0.0	12.00	8.20	.0000	.0010	.5000	.0003	.85	3.90	.....	d
756	Aug. 29	Slight	Slight	Veg.	0.0	27.60	12.80	.0010	.0032	1.1000	.0013	2.60	8.70	.....	b

* Trace.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
757	1902. Aug. 29	None	None	Slight	0.0	7.50	4.00	.0010	.0014	.0300	.0000	.45	3.70	.....	g
758	Aug. 29	None	None	None	0.0	55.20	43.40	.0104	.0020	2.5500	.0160	6.10	14.60	.....	b
759	Aug. 29	None	None	Slight	0.0	8.90	6.70	.0000	.0000	.0300	.0000	.30	4.10	.....	g
760	Aug. 28	None	None	Slight	0.0	60.10	46.00	.0040	.0112	.0300	.0017	.65	8.10	.....	b
761	Sept. 2	None	None	None	0.0	6.00	2.50	.0000	.0028	.0700	.0000	.22	1.80	.....	g
762	Sept. 1	None	V. slight	V. slight veg.	0.1	4.80	1.90	.0000	.0044	.0150	.0000	.05	.30	.....	g
763	Sept. 2	None	None	V. slight foul	0.0	39.20	25.30	.0000	.0034	1.9500	.0000	3.07	10.90	.....	b
764	Sept. 2	None	None	None	0.0	7.70	6.70	.0000	.0000	.0220	.0000	.12	4.80	.0120	g
765	Sept. 1	None	None	None	0.0	5.50	3.60	.0000	.0024	.0300	.0000	.05	1.80	.....	g
766	Sept. 2	V. slight	Slight floc.	None	0.0	5.60	4.30	.0000	.0000	.0000	.0000	.05	3.20	.....	g
767	Sept. 1	None	None	Foul	0.0	15.10	7.10	.0320	.0098	.5500	.0002	1.35	5.50	.....	b
768	Sept. 2	None	None	None	0.0	11.50	8.10	.0000	.0012	.4000	.0000	1.00	6.80	.....	g
769	Sept. 3	V. slight	None	Foul	0.0	5.20	3.10	.0046	.0022	.1000	.0003	.17	3.10	.....	g
770	Sept. 3	None	None	Slight musty	0.0	15.36	11.70	.0940	.0108	.6100	.0018	.98	4.80	.....	b
771	Sept. 3	None	None	None	0.0	6.10	3.90	.0000	.0000	.0300	.0000	.06	3.60	.....	g
772	Sept. 3	None	V. slight	None	0.0	8.40	4.70	.0000	.0018	.0250	.0000	.08	4.70	.....	g
773	Sept. 2	None	None	None	0.0	21.30	16.70	.0000	.0050	1.5500	.0002	1.62	6.70	.....	b
774	Sept. 3	None	None	Decided veg.	0.2	6.10	1.80	.0020	.0074	.0000	.0000	.12	1.60	.....	g
775	Sept. 4	None	None	Decided veg.	0.1	4.30	1.50	.0000	.0102	.0000	.0000	.12	1.50	.....	g
776	Sept. 5	None	None	None	0.0	5.20	3.70	.....	.....	.0000	.0000	.06	2.70	.1510	b
777	Sept. 5	None	V. slight	Slight veg.	0.0	14.10	8.70	.0028	.0110	.6000	.0000	.99	5.40	.....	d
778	Sept. 4	None	V. slight	None	0.0	4.30	3.10	.0000	.0000	.0350	.0000	.10	2.00	.....	g
779	Sept. 5	None	V. slight	None	0.0	6.40	3.20	.0000	.0000	.0300	.0000	.12	2.90	.0560	d
780	Sept. 6	None	None	Slight foul	0.0	9.20	5.80	.0012	.0030	.0900	.0000	1.10	2.80	.....	g
781	Sept. 6	V. slight	None	V. slight	0.0	14.10	8.40	.0012	.0034	.2800	.0000	1.97	5.70	.....	b
782	Sept. 6	None	None	Slight earthy	0.0	7.40	3.50	.0000	.0030	.0220	.0000	.27	3.10	.....	g
783	Sept. 6	None	None	V. slight	0.0	8.50	4.00	.0000	.0000	.3000	.0000	.10	2.70	.....	g
784	Sept. 8	None	None	None	0.0	15.20	9.50	.0012	.0028	.3500	.0003	.85	5.50	.....	g
785	Sept. 9	None	None	None	0.0	13.00	4.60	.0000	.0010	.3500	.0000	1.50	3.90	.0330	d
786	Sept. 9	V. slight	V. slight	Slight veg.	0.25	8.70	1.50	.0000	.0036	.0000	.0000	.10	1.40	.....	g
787	Sept. 9	None	None	None	0.0	11.10	7.60	.0000	.0028	.0900	.0000	.62	7.50	.....	g
788	Sept. 9	None	None	Slight veg.	0.45	8.30	2.40	.0014	.0100	.0100	.0000	.15	2.40	.....	g
789	Sept. 9	None	None	Slight veg.	0.45	10.10	1.80	.0000	.0142	.0000	.0000	.11	1.50	.....	g
790	Sept. 10	Slight	Consid. veg.	Slight veg.	0.25	9.80	1.20	.0000	.0120	.0000	.0000	.35	1.10	.....	g

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
791	1902. Sept. 10	None	None	None	0.0	6.60	5.10	.0000	.0000	.0800	.0000	.40	3.20	.....	g
792	Sept. 9	V. mark.	V. much white clay	Slight earthy	*	10.00	8.00	.0000	.0030	.0120	.0000	.25	3.70	.....	g
793	Sept. 9	Slight	Slight	Slight veg.	0.0	11.80	7.20	.0000	.0080	.0000	.0000	.73	5.70	.....	g
794	Sept. 9	None	Slight	V. slight	0.0	6.40	4.80	.0000	.0012	.0120	.0000	.60	3.10	.....	g
795	Sept. 11	None	None	Decided veg.	1.90	8.70	2.00	.0028	.0234	.0000	.0002	.11	2.00	.....	b
796	Sept. 9	Slight	Cons. floc.	V. slight	0.0	6.90	2.60	.0000	.0066	.0000	.0000	.08	2.30	.....	g
797	Sept. 11	None	None	Slight veg.	0.15	6.30	2.30	.0000	.0056	.0000	.0000	.12	1.90	.....	g
798	Sept. 11	V. slight	Slight	Marked veg.	0.55	8.80	3.30	.0020	.0230	.0000	.0000	.09	2.20	.....	d
799	Sept. 11	None	None	None	0.0	7.40	4.80	.0000	.0000	.0000	.0000	.10	1.90	.....	g
800	Sept. 11	None	None	None	0.0	5.60	2.20	.0010	.0030	.0150	.0000	.05	1.90	.....	g
801	Sept. 13	None	None	None	0.0	6.10	2.10	.0000	.0000	.0200	.0000	.05	2.00	.....	g
802	Sept. 13	None	None	None	0.0	7.30	3.60	.0000	.0014	.0150	.0002	.15	3.60	.....	g
803	Sept. 15	None	None	Slight	0.0	12.60	10.10	.0000	.0000	.0400	.0000	.50	5.50	.....	g
804	Sept. 15	None	None	None	0.0	6.80	3.30	.0000	.0016	.0200	.0000	.27	2.00	.....	g
805	Sept. 15	Marked	Much iron	V. foul	0.5	11.90	5.90	.0128	.0010	.0000	.0000	.16	2.90	.....	g
806	Sept. 15	None	None	V. slight	0.0	8.80	5.40	.0010	.0028	.0300	.0002	.55	4.10	.....	g
807	Sept. 14	Marked	Much floc. veg.	Decided foul	0.7	11.20	3.50	.0042	.0072	.0000	.0000	.10	3.10	.....	g
808	Sept. 17	V. slight	V. slight	Decided veg.	0.3	11.00	2.30	.0084	.0220	.0150	.0003	.45	1.90	.....	d
809	Sept. 18	None	None	None	0.0	7.60	4.20	.0010	.0022	.0000	.0000	.06	1.90	.....	g
810	Sept. 19	None	None	None	0.0	9.10	5.60	.0000	.0000	.1100	.0000	.36	4.10	.....	g
811	Sept. 19	None	Much floc. veg.	Slight	0.0	20.70	18.70	.0340	.0090	.1200	.0060	2.32	4.70	.....	b
812	Sept. 19	None	None	None	0.0	31.80	33.50	.0100	.0010	.9000	.1660	9.42	14.50	.....	b
813	Sept. 19	None	None	V. slight	0.1	3.40	1.50	.0000	.0010	.0200	.0000	.05	1.50	.....	g
814	Sept. 19	Marked	Much red	Slight	0.15	5.60	4.20	.0000	.0000	.1900	.0001	.40	4.20	.....	g
815	Sept. 20	None	Much floc. veg.	Decided veg., foul	0.0	6.10	5.10	.0008	.0042	.1000	.0001	.30	2.30	.....	g
816	Sept. 20	Slight	Slight	Foul	0.4	7.20	2.80	.0416	.0098	.0000	.0005	.10	2.30	.....	b
817	Sept. 21	None	None	None	0.0	4.10	1.50	.0000	.0000	.0000	.0000	.10	1.50	.2400	b
818	Sept. 22	None	None	None	0.0	.....	.....	.....	.....	.0120	.0000	.20	3.50	.0380	b
819	Sept. 22	None	None	None	0.0	7.50	5.80	.0000	.0020	.0150	.0000	.10	2.30	.0280	d
820	Sept. 22	None	None	None	0.0	5.30	2.60	.....	.....	.0000	.0000	.07	3.40	.1200	b
821	Sept. 22	None	None	None	0.0	6.10	4.20	.0000	.0010	.1100	.0000	.20	.....	.0280	d
822	Sept. 22	None	None	V. slight	0.1	4.00	1.10	.0000	.0062	.0000	.0000	.11	.60	.....	g
823	Sept. 22	None	Slight	Slight musty	0.1	3.50	.60	.0000	.0112	.0000	.0000	.07	.60	.....	g

* White.

Analyses of Water Supplies.—Continued.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
824	1902. Sept. 22	None	V. slight	Decided veg.	0.15	3.40	.70	.0000	.0090	.0000	.0000	.10	.60	.....	g
825	Sept. 21	None	Slight	None	0.0	.....	.....	.....	.....	.0700	.0000	.35	1.90	.....	g
826	Sept. 22	None	None	None	0.1	6.40	3.60	.0000	.0030	.0000	.0000	.13	3.40	.....	g
827	Sept. 22	V. slight	Slight	Slight	0.3	8.00	2.60	.0022	.0066	.0000	.0003	.18	2.60	.....	g
828	Sept. 22	None	None	Foul	0.0	12.40	7.50	.0000	.0000	.4500	.0002	1.12	5.40	.....	b
829	Sept. 22	None	None	None	0.0	25.80	17.20	.0000	.0024	1.0500	.0002	.87	7.70	.....	b
830	Sept. 22	None	None	None	0.0	30.70	19.40	.0000	.0010	1.6000	.0001	2.27	6.60	.....	b
831	Sept. 22	None	None	None	0.0	17.10	11.30	.0000	.0014	.0250	.0000	.42	5.90	.....	g

WATER SUPPLIES OF CITIES AND TOWNS.

WATER SUPPLIES OF CITIES AND TOWNS IN NEW HAMPSHIRE.

From time to time some investigations have been made by the State Board of Health into the character of certain public water supplies, the results of which have been mentioned, and in some instances quite extensively reported upon in the reports of this board.

Numerous private supplies, also, suspected of being the cause of illness, have been examined, but not before have we been able to present so valuable a mass of facts upon this subject as is included in this report, for the reason that not until the establishment of the State Laboratory of Hygiene were facilities afforded the board for systematic work in this direction.

A description of some of the public water supplies of the state was published in Vol. 14 of the reports of the State Board of Health, but while in some instances that report gives a very complete description of the system, in others they are not described at all, and only in a few cases was a report made upon the character of the water as shown by chemical analysis.

Although a great amount of work has been done at the laboratory in the investigation of our water supplies, and in the analysis of both public and private supplies, as is shown in this report, it has been impossible to analyze all the public supplies of the state. The work will be carried on, however, until this has been accomplished, and such occasional re-examinations will be made as may be deemed necessary to keep a careful watch over the quality of the water.

The large demand for the examination of private supplies, chiefly in cases where the water was suspected of pollution, has consumed so much of the time of the laboratory that not so much work could be done in the examination of public water supplies as was desirable; yet the benefit that has been afforded by the examination of these private supplies, by detecting many waters that were unfit and even dangerous for drinking purposes, has been not only a justification of this particular work, but of great value to many families and communities. As a result of this work, many wells that were polluted to an extent that was dangerous to the consumer have been closed, and other supplies of undoubted quality substituted.

Numerous instances in which an excessive amount of lead has been found, as is shown elsewhere in this report, and other conditions inimical to public health have been reported, and remedies applied in a great majority of cases. Many letters have been written, in addition to the chemists' regular report, pointing out what measures could best be carried out to remove existing dangers. So great has been the demand for examinations of this kind that not infrequently have we been unable to answer all the calls as promptly as we would have liked, yet in no instance has the laboratory declined to make an analysis of a water used for domestic purposes, or of a contemplated supply.

The board has in view investigations which thus far it has been impossible to undertake, among which may be mentioned the examination of the water supplies of our summer resort hotels. Many of these are known to be from sources of undoubted purity, from topographical examinations that have been made by the board from time to time. Nevertheless, analyses of these supplies will eventually be made.

The data given in the following report upon the water supplies of the cities and towns, with the exception of the laboratory work, were obtained through the courtesy of the local boards of health of the state. To get the facts in the briefest possible manner, the following questions were submitted:

STATE OF NEW HAMPSHIRE.

STATE BOARD OF HEALTH.

WATER SUPPLY.

Town

Does your town own or operate a public water supply?.....

Are there any private companies supplying water for public use?.....

If so, give corporate name of such.....

.....

When were the works built, and by whom?.....

.....

Is the source of supply a pond, stream, spring, or well?.....

If from a pond, state area, average depth, kind of bottom, etc.....

.....

.....

Give approximate area of watershed; wooded or cleared land; and number of inhabitants thereon.....

.....

.....

Are the shores of the pond frequented by picnic parties, or occupied by summer cottages?

.....

If from a stream, give approximate volume of water flowing under normal conditions

Does the stream receive any sewage, or waste from manufacturing operations above the intake of the supply?.....

If so, state approximate amount

If from springs or wells, give depth, quantity of water flowing, character of soil and subsoil, etc. Are wells bored, driven, or dug?.....

.....

.....

Is the water supplied by gravity, or pumped to standpipe or reservoir?.....

If standpipe, give capacity; if reservoir, give capacity, area, and depth.....

.....

How many miles of distributing mains are in use?.....

What kind of pipes are used for the mains?.....

What kind of pipes for service pipes?.....

What is the average daily consumption in gallons?.....

Has the water ever been analyzed? If so, by whom and when?.....

.....

State percentage of population using public water supply.....

State number of families using the supply described.....

Are there many private wells still in use within the radius reached by the public supply?.....

.....

(Signature)

(Postoffice address)

(Date)

REMARKS.—[Here give any facts or information relating to the subject not incorporated in above answers.]

The substance of the returns made, together with a report on the laboratory work done on both public and private supplies of the respective towns and cities, is given in the following pages.

ACWORTH.—No public water supply. Families get their water from wells or from springs, and lead pipe is used as a rule.

ALBANY.—There is no water supply other than wells and springs. The wells are mostly dug; a few are driven.

ALEXANDRIA.—No public supply. Water is obtained from private wells and springs.

ALLENSTOWN (SUNCOOK).—The Suncook water-works, established in 1877, is supplied from a pond of twenty-five acres and an average depth of fifteen feet. The water runs through five miles of galvanized iron distributing mains, by gravity, to sixty families. Twenty per cent of the population take this water.

*Chemical Examination of Water from a Faucet in Pembroke, Supplied by
Suncook Water-Works.*

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
744	1902. Aug. 25	None	None	Slight veg.	1.20	6.20	2.00	.0010	.0190	.0200	.0000	.15	1.90	.....	g

Samples from four private supplies were examined, three of which proved good and one of bad quality. See Nos. 192, 608, 706, and 743 in the table of analyses.

ALSTEAD.—No public supply. A member of the board of health writes: "The town of Alstead is supplied, first, from wells varying from five to possibly twenty feet in depth; say, two thirds use wells, the quality of the water being, on an average, very indifferent. About one third of the people pipe from 'springs,' some by themselves, while others band together in small numbers and so lessen the individual cost. As far as I know, with two exceptions, the running water has never been analyzed, and that was some ten years ago. The analysis of one water supply proved it to be very unsatisfactory, but it is still used. I think people hesitate about having their water supply tested for the reason that if it is condemned they will be uneasy, as they almost always get the water in first and analyze afterward."

Two samples, one from a surface well and the other from a driven well, have been examined. The surface well was found to be unfit for drinking purposes, and the other contaminated sufficiently to render water of doubtful quality, if not positively bad. See Nos. 231 and 428 in table of analyses.

ALTON.—No public supply. The Alton & Alton Bay Water-Works Company, established in 1892-93, supplies about one hundred families (90 per cent of the population) with water from a spring, except in dry weather, when it is pumped from Lake Winnepesaukee to a reservoir of 150,000 gallons' capacity. The water flows by gravity from the spring. There are three miles of distributing mains, cast-iron; galvanized iron service pipes.

Chemical Examination of Water from Faucet of Supply of Alton & Alton Bay Water Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
782	1902. Sept. 6	None	Slight earthy	None	0.0	7.40	3.50	.0000	.0030	.0220	.0000	.27	3.10	.....	g

AMHERST.—No public water supply. There are several private supplies, owned respectively by Elizabeth Nichols, Abby Melendy, H. H. Belden, and Frank Taylor, springs being the source in each case. The soil is very light and sandy, and none of the wells are over six feet deep. The distributing mains, lead, are something like three or four miles in length. About forty families take of this water, but there are also several individual wells within the radius reached by these supplies.

Chemical Examination of Water from Nichols, Belden, and Melendy Springs.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
422	1902. Mar. 3	None	None	None	0.0	.....	.....	.....	.....	.....	.....	1.20	.1600	....
423	Mar. 3	None	None	None	0.0	.....	.....	.....	.....	.....	.....	1.20	.1100	....
424	Mar. 3	None	None	None	0.0	.....	.....	.....	.....	.....	.....	1.40	.0265	....

The water from these supplies is of excellent quality, but dissolves lead readily. There are, however, no cases of lead poisoning recorded from use of the water.

Besides the above, a sample from one well was examined and proved to be unfit for drinking. See No. 425 in the table of analyses.

ANDOVER.—No public supply. Andover Center is supplied with water from springs on the south side of Ragged mountain. The water is collected in reservoirs 12 x 9, 10 x 12, and 15 x 8 feet, and 8 feet deep, and is conducted through lead pipes. Physicians in the town say they have noticed no ill effects from the use of this water. All the piping is

of lead. About thirty-eight families take from this water. The remainder of the town is supplied from individual wells, the water being conducted in nearly every instance through lead pipes to the houses. There have been a number of cases of lead poisoning from individual supplies.

Chemical Examination of Water from Tap of Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
841	1902. Oct. 9	None	Slight	None	0.0	7.00	2.90	.0000	.0000	.0000	.0003	.12	2.20	.....	g

Eight other supplies were examined, of which three were good, one doubtful because of the presence of lead in small quantities, and four were bad. Of the four bad waters two were condemned because of the presence of lead. For results see Nos. 25, 278, 399, 446, 451, 477, 597, 655.

ANTRIM.—A water supply was installed by the town in 1893, the source being a pond of about sixteen acres in area and of an average depth of sixteen feet. The water flows by gravity a distance of eight miles through wood mains, and the service pipes also are of wood. About one half the population, 175 families, take this water.

Chemical Examination of Water from Public Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
95	1901. July 30	None	Slight floc.	Strong veg.	0.4	3.40	.80	.0000	.0242	.0000	.0000	.11	.....	.....	...
96	July 30	None	Much floc	De veg. & musty	1.1	4.30	2.20	.0036	.0180	.0000	.0000	.12	.....	.....	*
97	July 30	None	Slight	Decided musty	0.3	4.50	1.80	.0074	.0150	.0080	.0000	.12	.....	.....	...
98	July 30	None	Slight	Decided aromat.	0.4	3.20	1.20	.0028	.0184	.0000	.0000	.13	.....	.....	...
177	Sept. 20	None	Slight	Faint veg.	0.25	3.50	.60	.0028	.0180	.0000	.0000	.09	.....	.....	...
178	Sept. 20	None	Slight	Faint veg.	0.25	4.40	.90	.0026	.0180	.0000	.0000	.09	.....	.....	...

* Iron, .2360.

All the samples were collected from faucets with the exception of No. 95, which was taken directly from the pond. At the time the first four samples were examined the water was in a very bad condition. The color was very high, the odor very offensive, and the organic matter excessive. This was caused by flowing a meadow which had not been stripped of turf and humus. Samples taken two months later showed a marked improvement in the quality of the water. Of the four other samples examined three were of excellent quality and one was badly polluted.

Samples from four private supplies, three wells, and one spring have been examined. One well was pronounced unfit for use; the others good water. See Nos. 40, 267, 303, 304, in table of analyses.

ASHLAND.—The town installed a water supply in 1894, from a pond about half a mile square; bottom mostly gravel. It is a gravity system; about nine miles of distributing mains, cast iron; service pipes, galvanized iron. About 200 faucets, representing 90 per cent of the population, have been put in. There are not many individual wells in the locality.

Chemical Examination of Water from Tap of Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
840	1902. Oct. 9	None	None	Veg.	0.25	6.50	1.00	.0000	.0064	.0000	.0000	.07	1.00	.....	g

A sample from one private supply has been analyzed and pronounced unfit to use. See No. 39 in table of analyses.

ATKINSON.—No public supply. Water is obtained from private wells.

AUBURN.—No public water supply. There is one private supply from which seven families are furnished, and one public watering trough for the town.

But one supply was examined, and that was found to be pure. For result see No. 454.

BARNSTEAD.—No public supply. Water is obtained almost wholly from wells, which have been dug from one to one hundred and thirty-five years.

The two supplies examined were found to be badly polluted, and unfit for drinking. For results see Nos. 21 and 752.

BARRINGTON.—No public or private water-works.

Three samples from private wells were examined, of which one was good, one bad, and one doubtful. For results see Nos. 559, 560, and 814 in the table of analyses.

BARTLETT.—The public water supply, owned by the village precinct, was installed about the year 1888, by the Bartlett Water Company. The source is a stream having a watershed of two square miles, wooded land, no inhabitants. It is a gravity. The distributing mains, and a majority of the service pipes, are of wrought iron. About one hundred families, the entire population, are consumers of this water. There is one private well in the locality.

Chemical Examination of Water from Tap of Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
880	1902 Oct. 21	None	None	V. slight veg.	0.1	4.90	.80	.0000	.0020	.0000	.0000	.07	.60	.....	sg

BATH.—No public supply. The Bath Aqueduct Company, private, about 1877 instituted a water supply from a spring excavated to a depth of six feet and twelve feet in diameter. It fills a two-inch pipe without slowing down. The iron distributing main is two miles long; service pipe is of iron. Fifteen families, 30 per cent of the population, are takers. A part of the village is supplied from other springs, five or six families taking from the same spring. There are no individual wells within the radius of these supplies.

Chemical Examination of Water from Faucet of Bath Aqueduct Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
802	1902 Sept. 13	None	None	None	0.0	7.30	3.60	.0000	.0014	.0150	.0002	.15	3.60	.....	sg

BEDFORD.—No public supply. Water is obtained wholly from private wells and aqueducts on the farms. There is no pond in town from which to obtain water.

BELMONT.—The Belmont water-works, owned by the town, were installed in 1893. Water is obtained from wells, supplemented by a stream in dry seasons. One well was bored two hundred feet deep, and two wells were dug. The water is pumped to a reservoir, covered, 120 x 20 feet, and 7 feet deep, and having a capacity of about 100,000 gallons. There are about four miles of distributing mains, of wood, while the service pipes are galvanized iron. One hundred and ten families take from this supply. There is a pumping station for use in dry seasons, by which water is pumped from a stream to the reservoir. There is also a private supply in the town.

Chemical Examination of Water from Tap of Belmont Water Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
364	1902. Oct. 15	None	None	None	0.0	5.60	3.00	.0000	.0030	.0000	.0000	.12	3.00	.....	g

The water from five other supplies was examined, and one supply proved to be bad, one doubtful, and three good. For results see Nos. 121, 299, 300, 382, and 397 in table of analyses.

BENNINGTON.—No public supply. The Bennington Water-Works Company, a private company, in 1900 installed a system supplied from springs, with a supplementary supply from a stream. The main supply is from springs and flows by gravity to a reservoir of about 1,500,000 gallons' capacity. There is an abundant supply. There are about four miles of distributing mains; 12-inch pipe, one fourth mile; 10-inch pipe, one mile and a fourth; 6-inch, one mile; and the remainder 2½ and 1½-inch. The small pipe is part of a system put in in 1887, and now attached to larger pipe. Can throw six good fire streams. Service pipe is ¾-inch galvanized iron. About ninety families, 60 per cent of the population, take this water. There are about fifty or sixty wells within the radius.

Chemical Examination of Water from a Faucet of the Bennington Water-Works Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
751	1902. Aug. 27	None	V. Slight	None	0.15	6.50	2.80	.0000	.0000	.0000	.0000	.10	1.50	.....	g

Two private supplies have been examined. Both were found to be good water, but one contained lead. See Nos. 202 and 344 in table of analyses.

BENTON.—No public supply. Water is obtained from springs, through lead pipes and logs, and from wells.

BERLIN.—No public supply. There are two private supplies, owned and operated by one company,—the Berlin water-works, built in 1892-93, and the Cold Water Spring Company, installed in 1898. The source is a stream and springs. The springs were excavated and made into a reservoir from rocky and ledgy land. Water flows by gravity. The stream is dammed so as to form a sort of a reservoir. There are twelve miles of distributing mains in the Berlin water-works system, cast iron; service pipes, galvanized iron. For a period of about six weeks each year, the latter supply has to be supplemented by water pumped from Androscoggin river, above the city limits.

Chemical Examination of Water from Tap of Berlin Water Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
843	1902. Oct. 9	None	None	V. slight	0.75	6.50	1.40	.0000	.0112	.0000	.0000	.05	1.40	.....	g

One other supply was examined and found to be of very bad quality. For result see No. 473.

BETHLEHEM.—No public supply. The Crystal Springs Water Company, a private corporation organized in 1878, gets its supply from springs, by gravity. Its reservoir has a capacity of about one thousand gallons. There are about twelve miles of iron distributing mains. Eighty-three families, or about 95 per cent of the population, are takers of this water.

Chemical Examination of Water Supplied by the Crystal Springs Water Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
347	1902. Jan. 3	Slight	Slight veg. and min.	Earthy veg.	0.2	5.30	3.80	.0074	.0076	.0400	.0000	.06	1.60	.....	g

BOSCAWEN.—Water is from the public supply, Penacook & Boscawen Water Precinct, constructed in 1892. The source is a pond of 340 acres; greatest depth, thirty-six feet; soil, largely gravel. The watershed is nearly seven square miles, both wooded and cleared. There are five or six houses on the shores of the pond. The water flows by gravity, through about thirteen miles of wooden mains, size from two to twelve inches. Service pipes are iron. About 250 families, or 95 per cent of the population, are supplied from this source.

Chemical Examination of Water from Faucet of Penacook & Boscawen Water Precinct at Penacook.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
789	1902. Sept. 9	None	None	Slight veg.	0.45	10.10	1.80	.0000	.0142	.0000	.0000	.11	1.50	.....	g

Four private supplies have been examined, of which two proved to be excellent water, and two contained lead in an amount that rendered them dangerous to use. See Nos. 393, 452, 535, and 589 in the table of analyses.

BOW.—No public water supply. Wells and springs are the principal sources of supply. Of the four supplies examined, two were good, one was polluted by sewage, and one contained a dangerous amount of lead. For results see Nos. 55, 72, 73, and 623.

BRADFORD.—No public or private system of water-works.

Samples from four private supplies have been examined, of which two were reported suitable for drinking purposes, one suspicious, and one wholly unfit for drinking. For detailed results see Nos. 111, 134, 289, and 305 in table of analyses.

BRENTWOOD.—No water supply other than individual wells and springs.

BRIDGEWATER.—No public supply. Wells and springs are the only sources from which water is obtained.

BRISTOL.—No public supply. The Bristol Aqueduct Company, a private corporation, have furnished water from Newfound lake since about 1887. The lake has an area of nine square miles; average depth about sixty-five feet. The water flows by gravity. There are six miles of mains, cement lined mostly; service pipes iron, and some lead. About 60 per cent of the population, 250 families, are takers. There are probably fifty wells and private springs within the circuit of this supply.

Chemical Examination of Water from a Faucet of the Bristol Aqueduct Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
747	1902. Aug. 26	None	V. slight	Slight veg.	0.15	3.90	1.50	.0016	.0050	.0000	.0000	.06	.40	.....	g

BROOKFIELD.—No public supply. All families in town are supplied with water from wells or springs.

BROOKLINE.—No public supply. Water is obtained from private wells and springs.

Chemical Examination of Water from Public Fountain Supplied by a Well.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
327	1901. Dec. 10	None	None	Slight foul	0.0	9.30	7.00	.0000	.0076	.1250	.0002	.80	2.00	.....	g

CAMPTON.—There is no public water supply. The town is supplied by private wells. In some cases two or more families take water from the same well.

Chemical Examination of Water from Pemigewasset River at Campton.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
234	1901. Oct. 28	None	None	Faint veg.	0.4	3.40	1.60	.0016	.0094	.0100	.0000	.06	1.60	.....	*g

* Sulfitcs, .0040.

On complaint of residents of Campton that paper-mill waste was polluting the river, analysis of the water was made and the results showed that the contamination was very slight and not of an injurious nature.

CANDIA.—No public supply. In 1894 or 1895, Mr. John A. Holt, shoe manufacturer at East Candia, introduced a water supply from a well bored one hundred feet deep. The well is on land elevated above surrounding country, and cannot be pumped dry by steam pump. The water is pumped by windmill to a tank of 7,000 gallons' capacity, elevated forty-five feet. The distributing main, 3-inch iron, is about one half mile in length; service pipes are $\frac{3}{4}$ -inch iron. Thirteen families and the shoe-shop are supplied from this source. There are quite a number of private wells in the locality.

Chemical Examination of Water from Supply of John A. Holt, East Candia.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
869	1902. Oct. 16	None	None	None	0.0	14.10	10.60	.0000	.0000	.4800	.0000	1.45	4.70	...	g

CANAAN.—No public supply. A private supply was introduced by the Crystal Lake Water Company in 1891. The supply is from Hart's pond, having an area of two hundred acres, an average depth of eighteen feet, and a sandy bottom. The watershed is about a thousand acres, partly wooded and partly cleared land, having about fifty inhabitants. The pond is fed by springs. It is a gravity system. The distributing mains are about two miles in extent, and these as well as the service pipes are of iron. Fifty families are supplied from this source. There are about a dozen private wells in the locality, and about a dozen springs from which water is obtained.

Chemical Examination of Water from Crystal Lake Water Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
868	1902. Oct. 16	Marked	Much floc.	Decided veg.	0.2	5.50	2.10	.0000	.0168	.0000	.0000	.07	2.00	.....	...

The water from seven of these supplies was examined and three were reported good, two were doubtful, and two were bad. The two doubtful waters were so reported because they contained small amounts of lead. For results see Nos. 219, 220, 230, 363, 479, 480, 715.

CANTERBURY.—There is no public or private water supply for the town. Most of the dwellings are supplied by individual wells.

Of the four supplies examined, two were good and two unfit to use as supplies for drinking and domestic purposes. For results see Nos. 504, 610, 738, and 739.

CARROLL.—No public water supply.

CENTER HARBOR.—No public or private system of water-works. The supply of the village is largely from springs, the water being conveyed through iron pipes. The Senter House pumps water from Lake Winnepesaukee for washing and bathroom purposes.

Three samples from private supplies have been examined: Two, from wells, were pronounced good; the other, from a spring, was found to be excellent water, but contained a slight amount of lead. See Nos. 447, 598, and 599 in table of analyses.

CHARLESTOWN.—No public water supply.

CHATHAM.—No public supply. The water supply is mostly from dug wells, a few springs, and a few places are supplied from brooks and comes through lead pipe. Some iron pipe is used.

CHESTER.—No general public water supply. There are several watering places for horses and cattle supplied by springs, and the town owns a well at one of the schoolhouses.

One sample from a well has been examined, and was classed as unfit for drinking. See No. 684 in the table of analyses.

CHESTERFIELD.—No public supply. Water is obtained chiefly from springs and wells.

CHICHESTER.—No public supply. The water used for drinking purposes is obtained chiefly from wells, dug and stoned. In some instances water is pumped by windmill to tanks or reservoirs, and is used for watering stock; or in case of fire. Four families take water from the river, but not to drink. Some water is also brought from the hills through lead or iron pipes.

Four samples from private sources have been examined, three of which were pronounced good and one bad. See Nos. 6, 505, 506, and 514 in the table of analyses.

CLAREMONT.—The town owns a water supply from a stream and a system of wells. The wells are twelve in number, dug twelve feet deep and covered with five feet of earth, so the depth of the wells is seven feet; they are three feet in diameter after being stoned. The amount of water is very abundant, and is pumped to the supply reservoir. Water from the stream is held in three reservoirs. There are about fifteen miles of distributing mains. Cement pipes were first used, but now all are iron; service pipes are galvanized iron. At least 1,000 families, fully 75 per

cent of the population, take this water. There are not many private wells in the locality.

Chemical Examination of Water from Town Supply Reservoir.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
791	1902. Sept. 11	None	None	Slight veg.	0.15	6.30	2.30	.0000	.0056	.0000	.0000	.12	1.90	.....	g

Besides the public supply, there are two private systems of water-works in Claremont: one, the Tyler water-works, was built in 1870, the source being springs. The springs are excavated all about a reservoir, into which the water runs. There are also springs in the bottom of the reservoir, which is about five acres in area; eight acres fenced with wire. The distributing mains, lead, are about ten miles in length, and the service pipes, also, are of lead. About 250 families are consumers, and each family is entitled to sixty gallons of water per day.

The other private system, known as the Grannis water-works, built about 1892 and owned and operated by Herman Holt, Esq., is also supplied by springs. There are two small reservoirs from which this water is taken: one some thirty feet in diameter, and about three feet deep on an average; the other some seventy-five feet in diameter, and of an average depth of about three feet. Both bottoms are blue clay hardpan. These reservoirs are perhaps thirty rods apart; are at the top of a precipitous bank covered with trees, at the foot of which runs a large brook known as Red Water brook, and the small area of land lying above the reservoirs, from which there might be some slight surface drainage at the time of melting snows in spring, is not occupied either as pasture or tillage. No animals enter upon it; no brooks enter either reservoir; no low land, no swamp, no places at which water can collect at any season of the year and flow or drain into these reservoirs lie above them. The springs supplying these two reservoirs come from a clay or hardpan band. Above and beyond this band is sandy soil, in which small pine trees are standing. Both reservoirs are surrounded by trees, mostly pine, and both are at the extreme upper edge of woodland. Each reservoir is but a few feet from the springs by which it is supplied. The water flows by gravity, and the pipe from the upper reservoir enters the pipe at the lower reser-

voir. There are about two miles of distributing mains, cast iron; service pipes mostly iron, but some lead. About twenty families, one hotel, one school building, and one mill (for drinking purposes) are consumers of this water.

*Chemical Examination of Water from Faucet of Hotel, Supplied by Grannis Water-Works.**

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
	1901.														
236	Oct. 28	None	None	None	0.0	7.10	4.40	.0028	.0044	.0200	.0003	.07	.....		g
237	Oct. 28	None	None	None	0.0	9.20	5.30	.0028	.0054	.0200	.0003	.07	.....		g
241	Oct. 31	None	None	None	0.0	7.80	5.70	.0010	.0040	.0200	.0004	.07	2.40	.....	g

* Sample 237 was from Farmington faucet.

CLARKSVILLE.—No public supply. Every dwelling in town is furnished with spring or well water.

CONCORD.—The Concord water-works, owned and operated by the city, were installed in 1871-72; extended to Penacook and St. Paul's School in 1882; high-service extension in 1891. The source of the supply is Penacook lake, with an area at high water of 337 acres; depth unknown; bottom gravelly. The watershed, about $3\frac{1}{8}$ square miles, is partly wooded and partly cleared. Outside of cottagers, a canvass showed seventeen inhabitants to the square mile. The shores are frequented by picnic parties, and are occupied by summer cottages. The water board controls about eight tenths of the shore. For the low service the water flows by gravity; for high service water is pumped to reservoir having a capacity of 2,000,000 gallons, and a depth of twenty feet from top of embankment, and fifteen feet from high-water mark; diameter at top of embankment, 195 feet, 8 inches. On January 1, 1902, there were 61.20 miles of distributing mains, cast iron and cement lined; service pipes, cement lined. About 17,000 persons are consumers of this water. There are a few private wells in water precinct.

Chemical Examination of Water from City Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
1	1901. May 22	V. slight	Slight	Decided veg	0.0	2.90	1.80	.0015	.0163	.0048	.0000	.13	.....	.....	g
2	May 22	V. slight	Slight	Faint veg.	0.0	...	.....	.0013	.0122	.0048	.0000	.12	.....	.....	g
3	May 22	Slight	Consid.	Decided veg.	0.0	.....	.....	.0013	.0149	.0048	.0000	.12	.....	.....	g
4	May 23	Slight	Consid.	Decided veg.	0.0	2.50	1.20	.0014	.0137	.0050	.0000	.12	.....	.....	g
107	Aug. 6	None	None	Decided veg.	0.12	3.30	.90	.0000	.0154	.0000	.0000	.11	.....	.....	g
113	Aug. 12	Slight	Slight floc.	Decided veg.	0.1	4.00	1.40	.0014	.0156	.0000	.0000	.10	.....	.....	g
357	1902. Jan 11	None	None	Veg.	0.1	3.20	1.20	.0030	.0138	.0000	.0000	.14	1.10	.....	g
398	Feb. 10	V. slight	V. slight	Veg.	0.12	3.70	1.90	.0044	.0136	.0000	.0000	.12	.90	.....	g
591	June 13	V. slight	V. slight	Decided veg.	0.15	5.30	1.50	.0016	.0146	.0000	.0000	.11	.70	.....	g
592	June 13	V. slight	Slight	Decided veg.	0.1	6.20	1.60	.0000	.0124	.0000	.0000	.11	.70	.....	g
593	June 13	V. slight	V. slight	Slight	0.15	5.50	2.10	.0006	.0072	.0000	.0000	.11	.70	.....	g
594	June 13	V. slight	V. slight	Veg.	0.15	6.10	1.70	.0006	.0126	.0000	.0000	.11	.70	.....	g
595	June 13	V. slight	V. slight	Veg.	0.15	6.70	1.70	.0006	.0108	.0000	.0000	.12	.70	.....	g
596	June 13	None	None	Veg.	0.15	6.20	1.60	.0000	.0112	.0000	.0000	.11	.70	.....	g
775	Sept. 4	None	None	Decided veg.	0.1	4.30	1.50	.0000	.0102	.0000	.0000	.12	1.50	.....	g

Chemical Examination of Water from Well at Penacook Lake Park.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
119	1901. Aug. 10	None	None	None	0.0	6.10	4.80	.0000	.0000	.0000	.0000	.24	1.90	.....	g

Chemical Examination of Water from Well at White's Park.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
120	1901. Aug. 16	None	Slight floc.	Faint veg.	0.0	14.00	8.30	.0000	.0010	.7000	.0000	1.13	3.05	.....	d

The water from twenty-two other supplies was examined. Eleven supplies were of good quality, six were bad, and five doubtful. For results see Nos. 23, 24, 38, 71, 91, 93, 117, 170, 179, 194, 301, 394, 419, 489, 529, 574, 590, 613, 646, 653, 769, 808.

CONWAY VILLAGE.—No public supply. The Conway Aqueduct Company, under local management, supplies this village with water from a system of natural springs, about two and a half miles from its center. The supply is not affected by drouth. The reservoir, which is oval in shape, the greatest dimensions being 100 x 50 feet and 5 feet deep, is fitted with a rinse pipe, and by which the reservoir is emptied once a year and thoroughly cleaned. There are about three miles of cast-iron (coated inside and out) service mains in the village, and two and a half miles to the reservoir. Galvanized iron service pipes are used. The average daily consumption, by 120 families, is from 2,000 to 3,500 gallons, varying with the season. This water was analyzed in 1890, and pronounced excellent. There are comparatively few private wells in the village, possibly twenty-five or thirty.

Samples from eleven private supplies have been examined, five of which were classed as good, and six of bad or doubtful quality. See Nos. 292, 353, 352, 569, 568, 567, 552, 551, 550, 664, and 289 in the table of analyses.

CORNISH.—No public water supply. All the families of this town depend upon wells, or water taken from springs through lead pipe, each family having a separate supply.

CROYDON.—No public supply. One private supply is from a spring, the water being brought one half mile through lead pipe, from which five families are furnished. Most of the water is from private wells.

DALTON.—No public supply. Water is obtained from individual springs.

DANBURY.—No public or private system of water-works.

A sample from one spring has been examined, and was pronounced good. See No. 364 in the table of analyses.

DANVILLE.—No public supply. The water supply of Danville is, in nearly every case, from a well near the house or underneath it.

DEERING.—No public water supply.

DERRY.—No public supply. In 1890 Boston contractors built the Derry water-works, consisting of about forty wells driven to a depth of fifty feet. The water is pumped to a standpipe of 180,000 gallons' capacity; average daily consumption of the 350 families supplied, 100,000 gallons. There are about eight miles of distributing mains, of cast-iron pipe; galvanized iron service pipes.

Chemical Examination of Water from Faucet of Derry Water-Works Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
794	1902. Sept. 4	None	Slight	V. slight	0 0	6.40	4.80	.0000	.0012	.0120	.0000	.60	3.10	.....	g

DORCHESTER.—The water used in town is from private wells and springs.

DOVER.—A public water supply was installed by the city of Dover in 1888. The area of the pond from which the supply is taken is, when full, 78 $\frac{3}{4}$ acres; when drawn down six feet, 69 $\frac{1}{2}$ acres. There are no measurable streams of water flowing into the pond, it being fed mainly from underground sources. The water is pumped to a reservoir of a capacity of 2,085,452 gallons when at a height of fourteen feet. The area of high-water surface is 27,172 square feet; depth of basin in center, 19 feet. There are twenty-five miles of cast-iron distributing mains; service pipes, wrought iron, cement lined. Two thousand nine hundred families, 85 per cent of the population, are takers of this water, and the average daily consumption in 1901 was 658,238 gallons.

Chemical Analysis of City Water Supply of Dover.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
246	1901. Nov. 4	None	None	Faint	0.0	5.50	2.40	.0010	.0080	.0000	.0000	.19	.....	.....	g

Six private supplies have been examined; four from wells, two from springs. Of these, five were pronounced good, or permissible for drinking, while one was bad. See Nos. 141, 430, 526, 587, 625, 639 in table of analyses.

DUBLIN.—This town has no water system, the supply being mostly from individual wells and springs, and from streams and ponds through private pipes, iron or lead.

Four supplies have been analyzed at the State Laboratory of Hygiene, and all found to be of excellent quality. For results in detail see Nos. 83, 110, 464, and 556 in the table of analyses appended.

DUMMER.—No public supply. Water is obtained chiefly from springs, wells, and aqueducts.

DUNBARTON.—No public supply. Water is obtained from springs and wells.

Two supplies examined were found to be of good quality. For results see Nos. 790 and 791.

DURHAM.—No public supply. In 1894 a private supply was installed, the water being obtained from several springs and wells, which are piped to a central, and from there pumped to a standpipe of 20,000 gallons' capacity. But little care was taken to exclude surface water when the system was introduced, and the wash and sewage from several houses entered the wells at certain periods of the year. Analyses of the water from the various sources showed a variable composition and the presence of sewage in a partially oxidized condition. In 1900 typhoid fever appeared in several families who used the water. The wells were thoroughly cleaned, drainage and sewage excluded, and at the present time the quality of the water is improved, and the supply is considered quite suitable for drinking. The wells are dug from ten to twenty-five feet,

through clay. Two miles and a half of iron mains are laid; service pipes of lead.

Chemical Examination of Water from Faucet of Supply of C. H. Pettee.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N				AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.			Nitrates.	Nitrites.				
784	1902. Sept. 8	None	None	None	0.0	15.20	9.50	.0012	.0028			.3500	.0003	.85	5.50	.....	...

Samples from three private supplies have been examined; one good, one bad, and one of doubtful quality. See Nos. 249, 491, and 674 in the table of analyses.

EAST KINGSTON.—No public water supply. There is one watering-trough, from which five families are supplied. Iron and lead pipe are used.

EASTON.—No public supply. Water is obtained from individual wells and springs.

EATON.—No public water supply.

EFFINGHAM.—No public supply. Water is obtained mostly from wells; a few springs; lead and iron pipes.

Sample of water from one well has been examined, and was pronounced unfit for drinking. See No. 245 in table of analyses.

ELLSWORTH.—No public supply. Water is obtained wholly from private springs and wells.

ENFIELD.—No public water supply. Water-works are now in process of construction. Forty-five thousand dollars voted for the purpose.

EPPING.—No water supply other than individual wells and springs.

Three supplies have been examined, and all were found to be suitable for drinking. See Nos. 112, 768, and 831 in the table of analyses.

ERSON.—No public water supply operated by town or private company.

Three samples of water from this town have been analyzed at the State Laboratory of Hygiene. Of these, one was pronounced potable; one, containing a large amount of lead, was condemned; and one, although apparently good, was so undesirably located that its abandonment was advised. For results see Nos. 106, 355, and 755 of the table of analyses.

ERROL.—No public supply. Samples of water from several suspected wells and springs were analyzed at the State Laboratory of Hygiene, at Concord, in the fall of 1901, and in those cases pronounced to be unfit for drinking purposes the wells have been abandoned for drinking purposes.

Of the eight supplies examined, five were badly polluted and three were found suitable for drinking. For results see Nos. 254, 255, 256, 257, 258, 259, 260, 261.

EXETER.—No public supply. The Exeter water-works, owned by a private company, were installed in 1886. The source of the supply is an artificial pond fed by springs and brook; area, twenty acres; average depth, eight feet; clay bottom. The water is pumped to a standpipe of 211,000 gallons' capacity. There are fourteen miles of cast-iron distributing mains; galvanized iron service pipes. Eight hundred families, 90 per cent of the population, take of this supply. There are no private wells within the radius of this supply.

Chemical Examination of Water from Faucet of Supply of Exeter Water-Works.

Number.	Date of collection.	ARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
749	1902. Aug. 26	V. slight	Decided red. floe.	Marked veg.	0.5	7.80	2.80	.0000	.0202	.0000	.0000	.37	2.0	S	.....

Numerous examinations of private wells have been made during the past year, and nearly all have been found to be badly contaminated by sewage. The water of certain wells has an abnormally high chlorine content, probably due to the fact that the wells enter a stratum permeated with salt from Exeter river. See Nos. 32, 62, 63, 64, 149, 150, 165, 193, 741, and 742 in table of analyses.

FARMINGTON.—The town owns and operates a water supply from two springs twelve feet deep. The water is distributed from a reservoir through four miles of cast iron, and cement-lined mains; service pipes of wrought iron and galvanized iron. One hundred and seventy families, one third of the population, are supplied from this source. There are not many individual wells in the locality.

Chemical Examination of Water from Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
853	1902. Oct. 10	None	Slight	V. slight	0.0	5.90	3.00	.0000	.0020	.0200	.0000	.45	3.00	.....	g

FITZWILLIAM.—No public supply. The water used throughout the town comes from wells or from springs, many families in the village having running water from springs the entire year.

The two supplies examined were found to be badly polluted. For results see Nos. 476 and 760.

FRANCESTOWN.—No public supply. There is a private supply from which twenty-four families take. The source is a spring, dug 8 x 10 feet, and 10 feet deep, through rocky soil and hardpan. The reservoir is covered. The water flows by gravity half a mile, through iron main, and iron service pipes. There are also many private wells in the locality.

Chemical Examination of Water from Spring Reservoir.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
783	1902. Sept. 6	None	None	V. slight	0.0	8.50	4.00	.0000	.0000	.3000	.0000	.10	2.70	.....	g

FRANCONIA.—No public supply. A private company, known as the Franconia Water Supply Company, in 1888 or 1889, introduced a water

supply from a spring a mile and a half distant. The water flows by gravity through iron mains and lead service pipes. The volume of water is about 10,000 gallons in twenty-four hours. About three fourths of the village population use the water.

Chemical Examination of Water of the Franconia Water Supply Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
387	1902. Feb. 1	None	Floc.	Earthy veg.	0.2	5.90	1.30	.0000	.0086	.0210	.0000	.10	1.30	.....	g

FRANKLIN.—The Franklin water-works, owned by the city, were built in 1891. The source is springs, which are about six feet deep, dug and bricked. There is a covered reservoir about twenty feet deep. Cast-iron pipe is used for the mains, of which there are about fifteen miles; lead, galvanized iron, and cement-lined iron pipes are used for service. The average daily consumption is 200,000 gallons. Seven hundred and fifty-two families are supplied, about three fourths of the entire population of the city. There are not many private wells in the locality.

Chemical Examination of Water from Faucets of Franklin Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
78	1901. July 24	None	None	None	0.0	3.90	2.70	.0036	.0052	.0200	.0000	.14	....	.0100	g
337	Dec. 20	None	None	Slight veg.	0.05	3.40	2.10	.0008	.0034	.0400	.0000	.18	.8	.....	g
338	Dec. 20	None	None	Slight veg.	0.05	4.00	2.40	.0314	.0050	.0220	.0000	.16	.8	.....	* g
339	Dec. 20	None	None	Slight veg.	0.05	4.40	1.40	.0026	.0054	.0760	.0000	.30	.8	.....	† g
804	1902. Sept. 15	None	None	None	0.0	6.50	3.30	.0000	.0016	.0200	.0000	.27	2.0	.....	g

* Sample taken from tap at pumping station.

† Sample taken from reservoir of sulfite spring.

In addition to the examination of the public water supply of Franklin, twenty-one private supplies have been analyzed. Ten of these sup-

plies were found to be of good quality; eight were bad; and three others were of doubtful quality. Of the eight supplies pronounced bad, three were so declared because lead was present in large quantities. For detailed results see Nos. 70, 76, 77, 133, 155, 204, 218, 279, 307, 315, 389, 411, 434, 453, 467, 474, 577, 584, 663, 748, and 785.

FREEDOM.—No public supply. Some three fourths of the families in town are supplied with water from springs through iron and lead pipes. A few wells are still used.

FREMONT.—No public or private water system.

GORHAM.—No public supply. The Alpine Aqueduct Company, organized in 1873, furnishes water to 160 families, one half the population. They have nineteen springs, three to seven feet deep, stoned and covered. The capacity is 10,000 gallons. The distributing mains, of cast iron and galvanized iron, are four miles in length; service pipes of iron.

Chemical Examination of Water from a Faucet of the Alpine Aqueduct Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
799	1902. Sept. 11	None	None	None	0.0	7.40	4.80	.0000	.0000	.0000	.0000	.10	1.90	.....	g

GILFORD.—No public supply. Water is obtained from individual wells and springs.

GILMANTON.—No public water supply.

GILSUM.—The only water-works in town are where two or three families unite in taking water from springs by laying a pipe. Wells are, however, chiefly used.

GOFFSTOWN.—The present system was built in 1891 by the Goffstown Fire Precinct, Goffstown Village. The reservoir from which the water supply comes is situated between the Uncanoonuc mountains and is surrounded by woodland. The reservoir is fed by springs in the bottom of the reservoir; by a brook, fed by springs flowing from the northeastern

slope of the north mountain; and from a swamp flowing into the brook near the mouth of the reservoir. The volume of water entering the reservoir daily, chiefly from the springs, is about 73,000 gallons, the full capacity being 2,250,000 gallons; area, 8,987 square yards; depth, about 18 feet. The water flows by gravity through five miles of cast-iron mains; service pipes are galvanized iron. The average daily consumption is possibly 75,000 to 100,000 gallons. There are 236 service faucets, representing about 99 per cent of the population. There are a very few private wells in the district reached by the public supply. The water supplied is of high color, and contains very much organic matter. There have been epidemics of bowel troubles at various times, which have been attributed to the condition of the water. The peculiar quality of the water is attributed to the fact that in the spring and during the heavy rains in the fall and at other times when it is wet or rainy the water flows from the swamp of one hundred acres into the reservoir. The precinct is planning to buy the swamp so as to control the flow of water from it. This is very desirable, and when accomplished will greatly improve the quality of the water. Parts of the town outside the precinct are supplied by wells and springs.

Chemical Examination of Water from Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPORATION		AMMONIA.	NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.		Nitrates.	Nitrites.				
201	1901. Oct. 10	None	Floc. veg.	Decided veg.	1.40	5.60	2.20	.0042	.0276	.0000	.0002	.17	.....	..
795	1902. Sept. 11	None	None	Decided veg.	1.90	8.70	2.00	.0028	.0234	.0000	.0002	.11	2.00	.....

GOSHEN.—No public supply. Water is obtained from wells, eight to twenty feet deep, through loam, gravel, clay, and sand.

Of the two supplies examined, one contained so much lead that it was unfit for use, and the other was of doubtful quality. For results see Nos. 502 and 586.

GRAFTON.—No public supply. All the water is obtained from individual wells and springs.

Four samples of water from this town have been examined at the State Laboratory of Hygiene. Of these two were potable, one was bad, and one,

containing a slight amount of lead, was pronounced of doubtful quality. See Nos. 118, 175, 294, and 296 of the table of analyses.

GRANTHAM.—No public supply. Water is obtained entirely from private wells and springs.

Five supplies from this town have been examined; three were found to be badly polluted, while two were of acceptable quality. For results see Nos. 341, 342, 343, 666, and 690 in the table of analyses.

GREENFIELD.—There is no public water supply. Water is obtained from wells dug four or five feet deep, in sandy soil, and flows by gravity one eighth of a mile through lead pipe. In two instances two or three families have shared the expense and have the same supply. One supply was declared dangerous by the State Laboratory of Hygiene.

Five samples have been examined and four found to be suitable supplies. One supply contained so much lead as to be unsafe. For results see Nos. 383, 384, 421, 437, and 753.

GREENLAND.—No public supply.

Nine private supplies have been examined and, with one exception, all found to be of good quality. For results see Nos. 167, 168, 379, 380, 381, 392, 676, 704, and 705.

GREENVILLE.—The town owns and operates a small water supply in the form of an artesian well 425 feet deep, ending in solid rock, and most of the distance below 125 feet in solid rock. The water is pumped to a brick reservoir of 20,000 gallons' capacity. The distributing main is of wood, from one fourth to one third of a mile in length; service pipes are of galvanized iron. Thirteen or fourteen families are supplied from this source, while a large number of others get their drinking water from the fountain in the public square, supplied from the artesian well. There are many individual wells.

Chemical Examination of Water from Faucet of Artesian Well Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
753	1902. Aug. 27	None	None	None	0.0	12.40	8.70	.0000	.0000	.0200	.0000	.12	3.90	.....	g

Four wells and one spring have been analyzed. Three wells and the spring were pronounced good; the other well, bad. See Nos. 26, 285, 462, 516, and 648 in the table of analyses.

GROTON.—No public supply. Water is obtained from individual springs and wells.

GROVETON.—The Northumberland water-works, owned by the village of Groveton, were constructed in 1895-96. Water is taken from a stream fed by springs, and flows by gravity to a reservoir of 600,000 gallons' capacity. There are about five miles of distributing mains, cast iron; service pipes of galvanized iron. Ninety-seven per cent of the population are supplied from this source. There are three or four wells within the radius.

Chemical Examination of Water from a Faucet of the Northumberland Water Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
785	1902. Sept. 1	None	None	None	0.0	5.50	3.60	.0000	.0024	.0300	.0000	.05	1.80	.....	g

One private well has been examined and was pronounced bad. See No. 336 in table of analyses.

HAMPSTEAD.—No public supply. A member of the board of health writes: "Although we have no water-works, we could have at small expense, as Wash pond is almost pure and is fed wholly by springs. A hill to the south would give power enough for the whole village."

But one sample was examined, and that was found to be badly polluted. For results see No. 459.

HAMPTON.—The water supply of this town is from individual wells and springs, as it has been for the past two hundred years and more. A water company has been formed recently, and it is expected that a good and sufficient supply of water will be supplied in the near future.

Three samples of water from this town have been examined at the State Laboratory of Hygiene. Of these two proved to be potable, and

one unfit for drinking. See Nos. 385, 507, and 606 of the table of analyses.

HAMPTON FALLS.—No public water supply.

But one private supply has been examined, and that was found to be badly polluted. For result see No. 507.

HANCOCK.—No public supply. Water is obtained from springs and wells. Water for the village is brought from wells a few feet deep, dug on a hill, thus obtaining an almost unlimited supply. The whole village supply is taken by individuals from this source.

The three supplies examined were all of excellent quality. For results see Nos. 414, 589, and 617.

HANOVER.—The Hanover water-works, installed in 1893, is an impounded water in a large artificial pond. The bed of the pond was a fertile valley, which was not cleared of vegetation before impounding the water. The dam went into blue clay, and exposed much. The watershed is fertile, and there are several houses on it. Water is unlimited in quantity, and has a head of over one hundred and fifty feet. This water has gone through a great variety of conditions, as was to be expected. The second winter it developed the characteristics of an effervescing chalybeate sulphur water, sulphuretted hydrogen being the main feature. In 1899-1900, *uroglora* appeared, and the water was intolerable for a time. It has appeared in a lesser degree since. Frogs innumerable bred in the reservoir, but have disappeared since it was stocked with bass. The water has always been colored, rich in dissolved vegetable matter, with some little taste and odor, though usually not offensive. It will probably be a long time before the supply approaches the conditions of a natural pond water. The distributing mains are of cast iron; service pipes, galvanized iron. The Hanover Aqueduct Association, a private corporation, furnishes a water that is used largely, though not exclusively, for drinking purposes. It is a normal spring water, the wells being four or five in number and dug to a depth of twenty feet, and yielding 4,000 gallons per day. The water is conveyed through lead pipe, running constantly, without much lead, and is stored in small reservoirs in the houses. The lead pipe and the possibility of unclean reservoirs are the only objections to the supply. There are very few individual wells in this locality.

Chemical Examination of Water from Supply of the Hanover Water-Works Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Remarks.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.			
...	1893. Oct. 29	Mark.	Much	.....	Faint yel. brown	8.10	4.00	.0170	.0240	.0000	.0000	*	2.90	Reservoir filling
...	Nov. 27	Mark.	.....	.....	Faint yel. brown	7.20	2.68	.0080	.0170	.0000	.0000	*	2.70	Reservoir half full
...	Dec. 29	Faint	.....	.....	Faint yel. brown	6.08	3.16	.0038	.0178	.0000	.0000	.10	2.70	Heavy thaw
...	1894. Jan. 26	None	None	.....	0.7	8.50	.....	.0088	.0224	.0000	.0000	.26	....	Heavy thaw
...	Feb. 8	None	None	Foul	0.7	8.50	4.60	.0010	.0132	.0000	.0000	.20	4.10	Offensive
...	Mar. 8	None	None	Slight	0.3	10.00	5.70	.....	.....	.....	.....	.40	1.92	Heavy thaw
...	Apr. 10	Slight	.....	.....	0.3	4.88	1.80	.....	.....	.0400	.0000	.16	.....	.....
...	Dec. 27	.....	.....	.....	0.7	.....	.....	.0003	.0250	.0200	.0000	.05	2.99	Sample from pipes
...	1896. Mar. 20	.....	.....	.....	0.5	5.28	2.64	.0066	.0180	.0000	.0000	.10	1.43	.....
...	1902. Sept. 11	Very slight	Slight veg.	V. decid. & earthy	0.55	8.80	3.30	.0020	.0230	.0000	.0000	.09	2.20	.....

* Trace.

We are indebted to Prof. Edwin J. Bartlett of Dartmouth College for all but the last of the analyses. They were made by him while the supply was being introduced and the year following, when the water was in a bad condition. The water is now of the same general character as in 1896. The color and odor are very pronounced, and the albuminoid ammonia is very high.

HARRISVILLE.—No public water supply.

Four samples from three supplies have been examined during the past year, and all found unfit for use. One was badly contaminated by lead and the others by sewage effluents. For results see Nos. 144, 221, 247, and 443.

HART'S LOCATION.—No public supply.

HAVERHILL.—No public supply. The Haverhill Aqueduct Company, a stock company, built a system of water-works for the town more than fifty years ago, the source of the supply being a spring. Water flows by gravity through lead main and service pipes. Fifty-two families, nine tenths of all the inhabitants, are takers of this water.

Chemical Examination of Water from Faucet of Haverhill Aqueduct Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
771	1902. Sept. 3	None	None	None	0.0	6.10	3.90	.0000	.0000	.0300	.0000	.06	3.60	.....	g

One well has been examined, and found to be unfit for use. See No. 74 in table of analyses.

HEBRON.—Water supply of the town is obtained from individual wells and springs.

HENNIKER.—No public supply. Water is from the private supplies of the Henniker Spring Water Company, installed in 1884, and the Dow System, installed in 1874. The sources are springs and wells. The wells are dug. The quantity of water, both systems, is estimated to be 4,000 gallons per day. Water flows by gravity to reservoirs 34 x 27 feet, 17 feet deep; 34 feet diameter, 12 feet deep; 8 feet diameter, 7 feet deep. There is estimated to be about four miles of distributing mains. All pipe used is of galvanized iron. There are no private wells in the locality.

Chemical Examination of Water from a Faucet of the Henniker Spring Water Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
745	1902. Aug. 26	None	None	None	0.0	5.90	4.50	.0000	.0000	.0100	.0000	.07	2.60	.....	g

Sample from one spring has been examined, brought through lead pipe. Water contained small amount of lead. See No. 581.

HILL.—No public supply. There are two private supplies in town, One owned by George A. Sumner, constructed in 1890, is taken from a

stream about a mile long at the dam. The pond thus formed is about one half an acre in area and ten feet deep. The sewage from a shop, employing fifteen hands, empties into this stream. Fifteen families are supplied with water from this source, through one mile of galvanized iron distributing mains and galvanized iron service pipes. There are eight wells and three aqueducts within the radius of this supply. In 1893 a supply from a spring was introduced by Mr. F. R. Woodward. This spring flows about fifty gallons per minute; soil sand and clay. The mains, of cement and iron, are one and a half miles long, while the service pipes are of galvanized iron. The average daily consumption by the thirty families taking this water is 4,000 gallons. There are only two wells within the radius of this supply.

Chemical Examination of Water from a Faucet in Hill, Supplied by F. R. Woodward's Water Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
761	1902. Sept. 2	None	None	None	0.0	6.00	2.50	.0000	.0028	.0700	.0000	.22	1.80	.....	g

Chemical Examination of Water from a Faucet in Hill, Supplied by Geo. A. Sumner's Water Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
786	1902. Sept. 9	V. slight	V. slight	Slight veg.	0.25	8.70	1.50	.0000	.0036	.0000	.0000	.10	1.40	.....	g

HILLSBOROUGH BRIDGE.—The Hillsborough Bridge Village Fire Precinct owns a water supply, instituted in the autumn of 1886. The source is a pond of about 500 square acres; average depth about fifteen feet; bottom, sand and ledge, with natural deposit. The water flows by gravity to intermediate reservoir of 500,000 gallons' capacity. Surface area of

reservoir, 100,000 square feet. The distributing mains, four miles in length, are of cast iron, and cement-lined sheet iron, chiefly; service pipes are of galvanized iron. About 95 per cent of the population are served from this supply. There are very few individual wells in the locality.

Chemical Examination of Water from Faucet of the Hillsborough Bridge Village Fire Precinct.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
746	1902. Aug. 20	None	None	None	0.2	3.70	1.30	.0000	.0060	.0120	.0000	.12	1.20	.....	g

One sample from a private supply from a brook has been examined. Good water, but traces of lead. See No. 495.

HINSDALE.—No public supply. Every family has a private well.

Fifteen samples have been examined, twelve of which are private supplies. Three examinations were made of proposed supplies, and aside from a high organic content the waters were of good quality. Seven private supplies proved to be pure, and five were found to be badly contaminated. For results see Nos. 42, 43, 44, 45, 84, 85, 86, 87, 101, 102, 103, 104, 223, 460, and 503.

HOLDERNESS.—Nearly all the water used in town is from wells and springs.

Sample of water from one well has been examined, and found to be slightly contaminated, but not sufficiently to condemn it. See No. 137 in table of analyses.

HOLLIS.—No public or private water supplies.

Two samples of water from this town have been analyzed at the State Laboratory of Hygiene, and both were pronounced good. See Nos. 116 and 488 in the table of analyses appended.

HOKSETT.—No public supply. There are two private supplies. One, owned by Mrs. M. C. Towle, is from a brook which has been dammed. The watershed extends for about half a mile on each bank. The other supply, owned by Henry C. Carbee, is from a pond supplied by springs.

The water is pumped to a reservoir having a capacity of about 40,000 gallons. There are about two miles and a half of 2½-inch iron distributing mains; service pipes of 1½-inch iron. Seventy-five families are supplied from these sources, 10 per cent of the population. There are many private wells in the locality.

*Chemical Examination of Water from Various Sources in Hooksett.**

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPORATION		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
865	1902. Oct. 16	V. slight	Floc.	Veg.	0.9	4.60	1.40	.0000	.0114	.0000	.0000	.17	1.30	.....	g
866	Oct. 16	None	None	Slight veg.	0.0	3.40	1.20	.0000	.6042	.0000	.0000	.17	.90	.....	g

* Sample No. 865 is from supply of Mrs. M. C. Towle; No. 866, from that of Mr. Henry C. Carbee.

One well supply was examined and found to be very badly polluted. For result see No. 616 in table of analyses.

HOPKINTON.—No public supply. There is a private supply, introduced by the Hopkinton Village Aqueduct Association, from springs and wells. The wells are dug from eight to ten feet deep. It is a gravity system. The reservoir is 10 x 10 x 8 feet. The distributing mains are from one to two miles in length, and are of iron; service pipes mostly of lead. Fifty or more families, seven eighths of the population of Hopkinton village, are consumers. There are but few private wells in the locality.

Chemical Examination of Water from Supply of Hopkinton Village Aqueduct Association.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPORATION		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
876	1902. Oct. 16	None	None	None	0.0	8.90	4.20	.0000	.0030	.0300	.0000	.15	1.60	.....	g

One well supply was examined and found to be of excellent quality. For result see No. 181 in table of analyses.

HUDSON.—No public supply. The Hudson water-works, owned by a private company, were built in 1892. The source of the supply is a well twenty feet deep and twenty-two feet wide, dug through loam and gravel. The water is pumped to a standpipe twelve feet in diameter and sixty feet high. There are about four miles of distributing mains, of iron, as are also the service pipes. Seventy-five families are thus supplied, one tenth of the entire population of the town. There are six or seven wells within the radius of this supply.

*Chemical Examination of Water from Well Supplying Town of Hudson.**

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
69	1901. July 16	None	Slight floe.	None	0.0	6.00	3.70	.0014	.0026	.1000	.0000	.40	.....	.....	g
135	Aug. 26	None	Slight floe.	Faint veg.	0.0	20.60	9.60	.0068	.0024	1.2000	.0044	.44	3.50	.....	b
164	Sept. 16	Marked	Much min.	Peculiar	0.0	15.00	7.50	.0024	.0036	1.2000	.0014	.39	4.10	.....	b
183	Sept. 30	Marked	Much min.	Faint oily	0.0	16.30	9.40	.0062	.0044	.7700	.0077	.39	5.90	.....	b
272	Nov. 7	Marked	Much floe.	Foul	0.0	19.30	12.00	.0320	.0088	.3333	.0380	1.19	.....	.....	b

* Samples Nos. 135, 164, 183, and 272 are from well near Smith's schoolhouse. This supply is a driven well made within a year for the purpose of supplying Smith's school. So far as can be determined it is located away from all contaminating substances, and no explanation can be given for the peculiar results of the analyses.

In addition to the analyses recorded above, nine private supplies were examined, of which five were good, three were bad, and one doubtful. For results see Nos. 129, 362, 395, 396, 410, 435, 436, 461, and 233 of the appended table of analyses.

JACKSON.—No public water supply. Most of the farmers and boarding-houses are supplied from individual springs on their premises. A part of the village use well water, which is considered questionable.

One sample examined was found to be of doubtful quality. For results see No. 429.

JEFFERSON.—No public supply. The chairman of the board of health writes: "Jefferson has no public water supply. The Waumbek Hotel Company have a fine supply system of their own from natural springs and

spring brooks. The different families have their own private water supplies, chiefly from springs, through iron pipes, directly to their houses and stables. Galvanized iron and cast-iron pipes are also used, and some few fir balsam logs. In a few wells on the flat lands, chain pumps, well-sweeps, patent suction pumps, and the old-fashioned pole and pail are used. Mountain springs are the chief sources of our supply, supposed to be pure."

*Chemical Examination of Water Supply of the Waumbek Hotel Company.**

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
184	1901. Sept. 30	None	None	None	0.0	3.80	1.80	.0016	.0042	.0480	.0000	.03	.....	.....	g

* Sample from spring east of main hotel.

JAFFREY.—The town instituted a system of water-works in 1902, the source being a pond in Rindge having an area of forty acres, an average depth of twenty feet, with hardpan bottom. The water flows by gravity through nine miles of 12-inch, cast-iron distributing mains; service pipes, 6-inch cast iron. It is estimated that one hundred and fifty families will become takers this year, 1902. Prior to the installation of this supply, Mr. Albert Annett, a member of the committee appointed by the town of Jaffrey to investigate the subject of a town system of water-works, was in communication with the State Laboratory of Hygiene, and collected several samples of water from the proposed supply, which were examined and reported upon by the laboratory. Following is the correspondence with Mr. Annett, together with the results of the analyses:

EAST JAFFREY, N. H., September 23, 1901.

State Board of Health, Concord, N. H.:

GENTLEMEN,—I have today sent you by express, prepaid, a bottle containing water taken from Bullet pond, in the town of Rindge. This pond is a proposed source of water supply for the town of Jaffrey, and we would like a chemical and bacteriological examination of this water, and would like your report in such form that it can be printed in connection with our committee report to the town.

Yours very truly,

ALBERT ANNETT,

Committee.

LABORATORY OF HYGIENE,

CONCORD, N. H., October 10, 1901.

Albert Annett, East Jaffrey, N. H.:

DEAR SIR,—Please find inclosed the results of the chemical examination of Bullet pond water.*

I trust that the delay in reporting results will not inconvenience you, but we have been making a thorough bacteriological examination, which seems to be very necessary.

I am sending you, by express, this morning a small bottle which I desire filled and returned so we may make a second bacteriological examination with fresh water.

Can you tell me if Bullet pond is used as a picnic ground or resort by parties and if it is also used for bathing purposes?

I will send you a complete report as soon as possible after the receipt of the second sample.

Very respectfully,

H. E. BARNARD.

Chemist.

LABORATORY OF HYGIENE,

CONCORD, N. H., November 1, 1901.

Albert Annett, East Jaffrey, N. H.:

DEAR SIR,—A bacteriological examination of the second sample of Bullet pond water does not confirm the results we obtained on the first sample, and I am sure the peculiar results we observed at the first examination were in no way due to the condition of the pond water, but rather to some unknown contamination, possibly introduced in sampling, or perhaps at the laboratory.

The chemical examination gives results agreeing with those sent you, and the bacteriological examination does not reveal any polluting material except many cyclops which, since they are large enough to be readily seen in a glass of the water when held to the light, may present an apparent objection to the use of the water for drinking. They will, however, disappear from the water in its passage through the pipes and their presence cannot be considered harmful.

I consider the water quite suitable for drinking and am sure it will furnish you with a supply much clearer and more free from organic matter than most of our pond waters.

If you desire any further examinations we shall be very pleased to make them, or to aid you in any way in securing a suitable supply for your town.

Very respectfully,

H. E. BARNARD,

Chemist.

EAST JAFFREY, N. H., December 23, 1901.

H. E. Barnard, State Chemist, Concord, N. H.:

DEAR SIR,—Referring again to your analysis of Bullet pond water, made for me in October, you speak of many cyclops that appeared in the sample

* For results of examination see No. 186 in the table of analyses.

submitted to you. I have no knowledge of this matter, but it has occurred to me that this pollution might be due to the manner in which the water was obtained. To get this sample I took an old fishing boat that was sunk on the shore, and I noticed at the time that the boat was covered with a slime, but as there was nothing better at hand I used it. If the cyclops were anything that came from the slime on the boat there was probably a much larger number of them in the sample sent you than would be found in the pond at large. The pond is now frozen over, and if an examination made now would be a fair test of the qualities of the water I would like to have you send me two of the flasks and I will send you samples for another analysis.

Much interest is being taken in the subject of water-works, owing to an epidemic of typhoid fever that we had during the summer, and I am one of a committee appointed to investigate the subject of a water supply and prepare a printed report to be distributed to the voters of the town.

Bullet pond appears to be our only available source, and from its situation it seems less liable to pollution than any other body of water in this section. The committee would like a complete chemical and bacteriological examination, and would like it in form to be printed with the committee report, and in such terms as to be understood by the ordinary voter.

Thanking you for your offer of further aid contained in your previous letter, and awaiting your reply, I remain,

Very truly yours,

ALBERT ANNETT,

For the Committee.

LABORATORY OF HYGIENE,

CONCORD, N. H., January 16, 1902.

Albert Annett, East Jaffrey, N. H.:

DEAR SIR,—In reply to your communication of September 23, 1901, requesting a chemical and bacteriological examination of Bullet pond water, which it is proposed to use as a source of water supply for the town of Jaffrey, the State Board of Health has investigated the pond and its surroundings, and has made several analyses of the water, the results of which are appended in full.

It appears that Bullet pond is an exceptionally clear and transparent body of water, very nearly free from water grasses, lily pads, and vegetable growths of any sort. It is situated between hills, and the shores are, for the most part, steep, and the water deep, varying from ten to sixty feet. It is remote from any village and is but little frequented for bathing, or for camping and picnics. There are three houses about the pond, but none are within six hundred feet of the shore. From its situation the pond does not seem liable to receive any polluting material.

The results of the various analyses, which have extended over several months, have been uniform, and show the water to be of good quality, very soft, free from turbidity and sediment, with a slight vegetable odor and color, due to dissolved organic matter. This may be much improved by cleaning the shores, removing decayed vegetation, and preventing excessive surface wash into the pond. The chlorine content is normal for your town; the solids are very low; ammonia in its oxidized conditions, as nitrites and

nitrites, is absent; and that present as free and albuminoid ammonia is wholly due to the vegetable matter always found dissolved in pond water.

The bacterial examination shows the water to be practically free from bacteria, but the biological examination shows cyclops of the order *Copepoda crustacea*, to be present in considerable numbers. The cyclops are aptly called "water scavengers," and are found very generally in our best pond supplies. Their presence is not considered detrimental, and as it is but rarely that they pass through the service pipes to the consumers, they will undoubtedly never give trouble.

Taking into consideration the location of the pond, and the uniformly good condition of the water, it would seem to be a wholly satisfactory source of water supply.

If you wish further investigations, we shall be glad to assist you by making such analyses as you may require and will give you such further advice as may seem desirable.

Very respectfully,

H. E. BARNARD,

Chemist.

Chemical Examination of Water from Bullet Pond, Rindge.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
186	1901. Oct. 1	None	Slight veg.	Decided veg.	0.12	2.80	1.30	.0016	.0166	.0000	.0000	.16	.....	.....	...
232	Oct. 20 1902.	None	None	Veg.	0.12	....	.....	.0016	.0180	.0000	.0000	.09	.....	.....	*
349	Jan. 5	None	None	Veg.	0.2	2.30	1.10	.0032	.0172	.0000	.0000	.08	.40	.....	†
348	Jan. 5	None	None	Veg.	0.2	2.50	1.10	.0032	.0162	.0000	.0000	.09	.40	.....	...

* A bacteriological examination does not show the presence of polluting material. Crustacea Copepoda present.

† Crustacea Copepoda, 80 per litre; bacteria, none; other forms of animal or vegetable life, none.

In addition to the examination of Bullet pond water, fourteen other supplies were examined, of which eight were badly polluted and six suitable for drinking. For results see Nos. 187, 188, 206, 207, 208, 235, 238, 239, 312, 322, 390, 450, 539, 558, 575, 576, 620.

KEENE.—In 1870 the city of Keene installed a public water supply from two ponds, one fifty acres and the other one hundred and ten acres in area; Sylvan lake having an average depth of twenty feet, and Echo lake, twelve feet. The water flows by gravity. The distributing mains, iron and cement, are about thirty-six miles in length; service pipes are of

iron. The average daily consumption is 1,358,000 gallons, nearly all of the city proper, 8,200 persons, being consumers. There are no wells.

Chemical Examination of Water from Keene.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
27	1901. June 24	V. slight	Slight floc.	Decided veg.	0.2	2.80	1.00	.0000	.0169	.0000	.0000	.18	.....		*
435	1902. Mar. 27	Slight	Slight	Veg.	0.23	1.60	.70	.0010	.0122	.0150	.0000	.07	.70	.....	†
456	Mar. 27	Slight	Slight	Veg.	0.23	2.00	1.00	.0020	.0076	.0000	.0000	.07	.70	.....	‡
457	Mar. 27	V. slight	Slight	Veg.	0.32	3.10	.80	.0009	.0052	.0000	.0000	.07	.60	.....	§
458	Mar. 27	Marked	Slight	Veg.	0.12	2.10	.80	.0010	.0078	.0000	.0000	.11	.60	.....	¶

* Sample from Goose Pond.

† Sample from intercepting reservoir.

‡ Sample from stream proposed as an additional supply.

§ Sample from small stream flowing through an alder swamp.

¶ Small stream, part of proposed supply.

In addition to the examinations of the public supply, three well samples were analyzed and all found badly polluted. One of these supplies contained an excessive amount of lead. See Nos. 417, 521, 523, 524, 605, 634, 740 in table of analyses.

KENSINGTON.—There is no water supply in town, other than individual wells and springs.

KINGSTON.—There is no public water supply. The people draw their individual supplies from private wells, dug from ten to twenty-five feet through light, dry, sandy soil. Samples have been analyzed in a few cases when contamination was suspected.

LACONIA.—No public supply. The Laconia Water Company is a corporation established in 1885. The supply is pumped from Lake Winnepesaukee to a reservoir of 2,750,000 gallons' capacity. There are eighteen miles of cement lined and ten miles of cast-iron mains; the service pipes are wrought iron, cement lined. The average daily consumption is 350,000 gallons.

Chemical Examination of Water Supply of Laconia and Lakeport.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
532	1902. May 19	None	V. slight	Slight	0.1	2.80	.90	.0000	.0014	.0000	.0000	.13	.60	.....	*g
822	Sept. 22	None	None	V. slight veg.	0.1	4.00	1.10	.0000	.0062	.0000	.0000	.11	.60	.....	†g

* Sample from Little Bay.

† Sample from a faucet at pumping station of the Laconia Water Company.

One private supply has been examined and pronounced good. See No. 227 in table of analyses.

An analysis has also been made of a sample from Lake Winnisquam, which was found to be of excellent quality. See No. 531 in table of analyses.

LANCASTER.—The Lancaster Water Company works were installed in 1891, and transferred to the precinct in 1894. The source of the supply is a mountain stream, wooded land, no inhabitants. The water flows by gravity, through six miles of cast-iron mains; service pipes are also of cast iron. All the families in the precinct are supplied from this source; there are no wells within the circuit.

Chemical Examination of Water from Faucet of Precinct Water-Works.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
813	1902. Sept. 19	None	None	V. slight	0.1	3.40	1.50	.0000	.0012	.0200	.0000	.05	1.50	.....	g

LANDAFF.—No public supply. The town is supplied with water from springs and wells. There are several public watering places on different roads.

LANGDON.—No public or private system of water-works. The people obtain water from private wells and springs.

LEBANON.—The water supply is owned by the Fire Precinct, and was installed in 1897. At first the water was taken from a stream flowing from Mascoma lake, but at present from wells, 63 x 30 x 15 feet, supplied by nine hundred feet loose-jointed pipe, taking water from subsoil mainly, the remainder being filtered through twenty-five feet of natural soil into the said pipe. The water is pumped to a reservoir of 1,000,000 gallons' capacity, being fourteen feet at the deepest point. There are ten miles of cast-iron distributing mains; service pipes, wrought iron. The average daily consumption is from 200,000 to 350,000 gallons, by seven hundred families.

The chairman of the board of health writes: "Mascoma lake receives water from Mascoma river, on which are sawmills and factories. At the head of the lake a small stream enters which receives sewage along its course. The lake also receives sewage from the Shaker buildings and from the village of Enfield."

Chemical Examination of Water from Reservoir Well.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
33	1901. June 27	None	Slight floc.	Slight veg.	0.3	4.60	2.80	.0000	.0115	.0000	.0000	.22	.....		g
34	June 27	None	Min. matter	V. slight	0 0	7.60	5.30	.0000	.0000	.0100	.0000	31	.....		g
53	July 6	Marked	Much min.	None	0.0	6.70	4.10	.0073	.0098	.0000	.0000	.33	.....		g
54	July 6	None	Min.	None	0.0	6.00	3.40	.0028	.0100	.0900	*	3 51	.....		g
614	1902. June 25	Slight	V. slight	Aromat. veg.	0.2	7.00	2.60	.0006	.0082	.0330	.0000	.12	1.80	.....	g

* Trace.

Six samples from private sources have been examined, of which three were pronounced good, two of doubtful quality, and one bad. See Nos. 48, 182, 269, 268, 270, 271 in table of analyses.

LEE.—There is no water supply other than wells and springs.

LEMPSTER.—No public supply, water being obtained from individual wells.

LISBON.—No public supply. The Lisbon water-works, owned by a private company and installed in 1887, is supplied from a pond fed by springs. The area of the pond is one hundred acres; the bottom is gravelly.

The water flows by gravity, and the reservoir has a capacity of one million gallons. All the pipes used, of which there are seven miles of distributing mains, are of wrought iron and cement. The average daily consumption is 250,000 gallons. About 90 per cent of the population are supplied from this source.

Chemical Examination of Water from the Reservoir of the Lisbon Water-Works Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
796	1902. Sept. 9	Slight	Consid. floc.	V. slight	0.0	6.90	2.60	.0000	.0066	.0000	.0000	.08	2.30	.....	g

Samples from one spring and one well have been examined: Spring water good. The well was badly contaminated with dynamite in digging, and was reported unfit for use. Thorough cleaning the well removed the offensive pollution and subsequent analysis showed the water to be good. See Nos. 10, 158, 360.

LINCOLN.—No public supply. In 1892 J. H. Henry & Sons introduced a system of water-works from a stream. The water flows by gravity. The mains, of iron, are about five eighths of a mile in length; service pipes are of iron. About eighty-five families, two thirds of the town, take this water.

Chemical Examination of Water from Faucet of Supply of J. H. Henry & Sons.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
762	1902. Sept. 1	None	V. slight	V. slight veg.	0.1	4.80	1.90	.0000	.0044	.0150	.0000	.05	.30	.....	g

LITTLETON.*—No public supply. The Littleton Water & Light Company operates a system of water-works instituted in 1880, from which about three hundred families are supplied. The water is taken from Ammonoosuc river, which receives sewage from towns above, and is pumped to a reservoir of half a million gallons' capacity. Gravity 4-inch pipe, 105 feet head, is 7,500 feet in length. There are nearly nine miles of 4-inch, 6-inch, and 8-inch cast-iron distributing mains; service pipes are iron and lead. The average daily consumption is 200,000 gallons. About 90 per cent of the population are supplied from this source.

Chemical Examination of Water Supplied by the Littleton Water and Light Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPORATION		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
7	1901. May 26	Slight	Much floc.	Slight veg.	0.4	4.10	1.90	.0018	.0155	.0000	.0000	.06	.....	.....	*
8	May 26	V. slight	V. much veg.	Slight veg.	0.3	3.80	1.60	.0016	.0067	.0000	.0000	.08	.....	.....	†
9	May 26	V. slight	V. much veg.	V. slight veg.	0.25	4.70	1.60	.0012	.0073	.0000	.0000	.07	.....	.....	†
88	July 26	None	Much floc. veg.	Faint veg.	0.2	4.00	2.20	.0032	.0130	.0050	.0000	.12	.....	.....	*
89	July 26	None	Much floc. veg.	Faint veg.	0.2	3.90	2.60	.0032	.0114	.0050	.0000	.12	2.40	.....	†
151	Sept. 16	None	Much floc.	Decided veg.	0.12	2.10	1.00	.0008	.0082	.0090	.0000	.10	.....	.....	†
185	Sept. 30 1902.	None	Floc. veg.	Faint veg.	0.2	3.70	1.90	.0026	.0696	.0000	.0000	.10	.....	.....	§
444	Mar. 13	Slight	Floc. veg.	Veg.	0.3	9.10	2.20	.0018	.0076	.0100	.0000	.04	1.10	.....	†
573	June 5	V. slight	Slight	Decided veg.	0.25	7.30	2.00	.0000	.0052	.0180	.0000	.09	1.90	.....	†
686	Aug. 4	Slight	Slight floc.	V. decid. veg.	0.5	4.90	1.40	.0000	.0098	.0000	.0000	.07	1.40	.....	*
687	Aug. 4	Marked	Floc.	Veg.	0.5	4.00	1.50	.0000	.0066	.0000	.0000	.07	1.20	.....	†

* Sample taken from river near intake.

† Sample taken from tap at schoolhouse.

‡ Sample taken from tap at house of Dr. G. F. Abbott.

§ Sample taken from dead end of pipe at Apthorpe.

LONDONDERRY.—No public supply.

LOUDON.—No public supply. All the water is obtained from wells and springs.

Six private supplies have been examined, of which five were found to be polluted and unfit for drinking; the other was classed as good. See Nos. 15, 29, 213, 224, 328, and 297 in the table of analyses.

* Also see special report on the "Pollution of Ammonoosuc River" in Vol. 16, Report of State Board of Health.

LYMAN.—No public supply. Water is obtained from wells and from springs, through lead pipe or logs.

LYME.—In 1838 the Lyme Aqueduct Company inaugurated a system of water-works, the source being springs. The water flows by gravity through lead, tarred-iron, and galvanized-iron mains, with lead service pipes. The average daily consumption is 4,300 gallons. Thirty-three families are so supplied.

Chemical Examination of Water from Supply of Lyme Aqueduct Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
772	1902. Sept. 3	None	V. slight	None	0.0	8.40	4.70	.0000	.0018	.0250	.0000	.08	4.70	.....	g

LYNDEBOROUGH.—No public water service; simply individual wells and springs.

One well has been examined, and was found to be polluted and unfit for use. See No. 528 in the table of analyses.

MADBURY.—No public supply; individual wells.

MADISON.—No public supply. The Silver Lake Reservoir Company, in 1886, introduced a supply from a natural spring. The water is pumped to a reservoir of 512 cubic feet capacity. Galvanized iron is used for main and service pipes. The average daily consumption is about 4,000 gallons, by ten families.

MANCHESTER.—A water supply was instituted by the city in 1873, was added to in 1886, and supplemented by a high service in 1894. The source is Lake Massabesic, having an area of 2,500 acres, an average depth of twenty feet, and a bottom partly rocky and partly muddy. It has approximately forty miles of watershed, wooded and cleared about equally. Some sawdust enters the lake. The water is pumped to a reservoir of 15,000,000 gallons' capacity, and an average depth of twenty feet. There are one hundred miles of distributing mains, iron; service pipes are iron, lead lined. The average daily consumption is 3,000,000 gallons. Twelve thousand two hundred families, nine tenths of the

population, are consumers of this water. There are not many individual wells within the radius of this supply.

Chemical Examination of Water from Lake Massabesic.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
369	1902. Jan. 21	None	None	Decided	0.8	5.70	1.20	.0054	.0204	.0000	.0000	.12	.70	.....	*
370	Jan. 21	None	None	Decided veg.	0.7	5.50	.70	.0044	.0228	.0000	.0000	.16	.70	.....	†
371	Jan. 21	None	None	Decided veg.	0.7	5.70	1.00	.0020	.0188	.0000	.0000	.21	.70	.....	‡
372	Jan. 21	None	None	Decided veg.	1.0	9.10	1.60	.0012	.0156	.0000	.0000	.17	.70	.....	§
727	Aug. 22	None	Floc. veg.	Veg.	0.35	7.40	1.30	.0000	.0106	.0000	.0000	.17	1.20	.....	¶

* Sample taken at high service intake.

† Sample taken at Deer Neck Bridge, Auburn.

‡ Sample taken halfway between Severance Beach and Battery Point.

§ Sample taken at mouth of Sucker Brook.

¶ Sample taken at tap in Board of Health building from low-service reservoir.

Chemical Examination of Water from Hanover Spring, Hanover Common.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
128	1901. Aug. 21	None	None	None	0.0	25.30	18.30	.0012	.0044	1.2000	.0000	3.72	8.20	.....	..
125	Aug. 19	None	None	None	0.0	25.60	20.30	.0020	.0022	1.2000	.0000	4.05	7.45	.....	*
728	1902. Aug. 22	None	None	None	0.0	22.60	13.40	.0000	.0000	.6000	.0007	2.90	7.20	.....	..
726	Aug. 22	None	None	None	0.0	28.00	17.70	.0006	.0038	.8000	.0000	3.45	6.80	.....	*

* Samples taken from tap at City Hall.

Hanover spring, situated in Hanover common, supplies the public fountains along Elm street. The spring is never-failing and originally furnished a very pure water. At present it is surrounded by a densely populated district, and each year is becoming more polluted. It is a peculiar fact that the last two examinations of water from the spring, made at an interval of one year, have shown a marked difference in composition, and that the chlorine content of water at the spring is lower than at the tap

in the city hall. Nitrites have appeared in the water at the spring this year, but not at the city hall tap. These peculiar discrepancies are as yet unexplained.

Chemical Examination of Spring Supplies.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
79	1901. July 24	None	None	None	0.0	14.90	10.00	.0012	.0000	.6000	.0001	2.07	6.00	.....	*
81	July 24	None	None	None	0.0	5.70	3.80	.0014	.0034	.0800	.0000	.49	.....	.....	†
127	Aug. 21	None	Slight floc. veg.	Slight veg.	0.1	3.50	2.30	.0006	.0016	.0140	.0000	.29	.....	.....	‡

* Sample taken from McGregor Spring.

† Sample taken from spring at Derryfield Park, from faucet of iron pipe.

‡ Sample taken from Stark Spring.

Chemical Examination of Water from Various Supplies of State Industrial School, Manchester.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
498	1902. May 5	None	None	None	0.0	9.70	5.60	.0026	.0034	.0800	.0000	.40	2.00	.....	*g
499	May 5	Slight	None	Slight veg.	0.0	7.60	4.50	.0000	.0026	.2500	.0000	.70	1.95	.....	†g
500	May 5	Marked	None	Marked stable	0.3	7.80	2.10	.0036	.0148	.0700	.0000	.40	1.60	.....	‡d

* Sample taken from bricked up spring west of pond.

† Sample taken from tank in top of main building fed by spring well near Union street.

‡ Sample taken from pond north of horse barn, while pond was turbid from heavy rains.

Thirty-seven supplies have been examined, of which fifteen were good, fourteen polluted, and eight of doubtful character. For results see Nos. 20, 79, 80, 81, 124, 125, 127, 128, 145, 146, 147, 148, 172, 173, 174, 281, 282, 283, 284, 323, 324, 325, 326, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 498, 499, 500, 510, 649, 670, 726, 727, 728, 729.

MARLBOROUGH.—No public supply. Water is taken from wells and springs through lead pipe.

Nine supplies have been examined and five of the number found to be of good quality. Two supplies were contaminated by sewage, and two otherwise pure supplies condemned because of the presence of quantities of lead in the water. For results see Nos. 154, 408, 420, 463, 534, 548, 561, 637, 697.

MARLOW.—No public supply. Families are supplied almost wholly from wells; a few have private springs.

The one supply examined was found to contain much lead and was doubtless the cause of a case of lead poisoning. For result see No. 354.

MASON.—There is no public water supply in the town. Wells and springs are the main source of supply, and are all owned by individual parties.

The one supply examined was badly polluted and unfit for use. For result see No. 412.

MEREDITH.—The Meredith Fire District owns and operates a water supply that was installed in 1894, the source being springs. The water flows by gravity from a reservoir on a hill. There is an ample supply, the reservoir never being more than two or three feet below high-water mark; an ample flow to supply the town. The area of the reservoir is about one hundred square rods. There are four and three fourths miles of iron distributing mains; service pipes are iron, with some lead lined. Ninety per cent of the families in the precinct take water from this supply. There are many private wells, also.

Chemical Examination of Water from a Faucet of the Supply of the Meredith Fire District.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
774	1902. Sept. 3	None	None	Decided veg.	0.2	6.10	1.60	.0020	.0074	.0000	.0000	.12	1.60	.....	g

Samples from two private wells have been examined, and both were found to be badly polluted. See Nos. 537 and 538 in table of analyses.

MERRIMACK.—No public or private system of water-works. The people of the town, with the exception of a few tenements, derive their water supply from wells. The tenements mentioned are supplied from a spring.

MIDDLETON.—No public supply. This is strictly a farming town, and each place has its individual well.

MILAN.—No public water supply. Water is obtained from individual wells. Samples from five of these were analyzed at the State Laboratory of Hygiene, and three of them condemned. For results see Nos. 509, 541, 545, 622, and 807.

MILFORD.—The public water-works of Milford were built in 1890 by John T. Langford, and purchased by the town in 1891. There are three collecting wells; two of them about thirty-five feet in diameter, and one twenty feet deep; one somewhat smaller is fed by driven pipes. Soil, gravel with clay bottom. The water is pumped to a standpipe of 250,000 gallons' capacity. There are about six miles of distributing mains, the pipe being iron, coated by the Smith process; service pipes are iron, cement lined. In 1901, the average daily consumption was 77,000 gallons. Five hundred and thirty-eight families, 50 per cent of the entire population, are supplied from this source. There are many private wells in the locality, but they are being gradually discarded.

Chemical Examination of Water from Faucet of Milford Water-Works.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
152	1901. Sept. 9	None	None	None	0.2	5.10	3.20	.0012	.0074	.0120	.0000	.23	.....	.....	g
826	1902. Sept. 22	None	None	None	0.1	6.40	3.60	.0000	.0030	.0000	.0000	.13	3.40	.....	g
827	Sept. 22	V. slight	Slight	Slight	0.3	8.00	2.60	.0022	.0066	.0000	.0003	.18	2.60	.....	*g

*Sample taken from well of Milford Water-Works.

In addition to the examination of the water supply of Milford, seventeen other waters from that town were analyzed at the State Laboratory of Hygiene. Five were of good quality, one was doubtful, and eleven were unfit for drinking. Of the eleven bad waters, six were so classified because of the large amount of lead they contained. For detailed results

see Nos. 92, 130, 153, 233, 351, 468, 578, 603, 619, 662, 672, 671, 810, 815, 816, 828, and 829 in the appended table of analyses.

MILLSFIELD.—No public supply. All water is from private springs, of an average depth of about four feet; cobbly bottom.

MILTON.—No public water supply. The town is supplied by individual wells, springs, or cisterns.

MONROE.—No public water supply. The health officer writes: "Our water supply in Monroe is mostly from springs above buildings, with the exception of two hydraulics that pump water from a ravine below the village at Monroe Plain. There is no sewerage system at the village, the soil is sandy loam, and the springs must take the drainage of buildings that stand just above. I was called this summer by our pastor to look at the water, and boxes that carry the water to the hydraulics. I found that the boxes contained a dark green sediment, which smelled very rank. I would advise that this water be analyzed. Several families in the village are having wells bored here on the plain, and I think some of the waste water from sinks runs on the ground within three feet of wells; privy not over ten or fifteen feet from and above well, which must take the drainage from both through this sandy soil."

One supply only was analyzed, and that found to be of superior quality. For result see No. 508.

MONT VERNON.—No public water supply. There is one town pump. Each dwelling, almost without exception, has its private well.

The two samples examined were both of doubtful quality. For results see Nos. 66 and 156.

MOULTONBOROUGH.—No public water supply.

The one supply examined was unfit for use. For result see No. 222.

NASHUA.—No public supply. A private supply, the Pennichuck water-works, installed by Nashua Aqueduct Company, in 1853, has for a source springs and wells. The wells, from sixteen to fifty-two feet in depth, are driven through alternate layers of marl, sand, fine gravel, and coarse gravel, and flow from twenty gallons to 275 gallons per minute. The reservoir, of 4,000,000 gallons' capacity, is thirteen feet in depth. There are about seventy-five miles of cast-iron distributing mains; wrought iron, galvanized, is used for service pipes. The average daily consumption is 3,500,000 gallons, by 4,000 families, about 95 per cent of the population. There are not over five or six wells.

*Chemical Examination of Water from Tap of Pennichuck Water-Works
Company.*

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
750	1902. Aug. 26	None	None	Slight veg.	0.0	6.00	1.50	.0000	.0000	.0000	.0000	.15	1.50	.....	g

The water from six other supplies was examined. Four supplies were of good quality, one was bad, and one doubtful. For results see Nos. 47, 56, 100, 378, 546, 650.

NEW BOSTON.—No public supply. The water supply of New Boston is from individual wells and springs.

NEWBURY.—No public supply. At Blodgett's Landing there are two small private supplies from springs. There are two small reservoirs, one supplying twelve or fifteen families; the other, five or six families.

NEWCASTLE.—No public supply. Water is supplied by private wells and cisterns.

NEW DURHAM.—There is no public water supply in town. The individual family supply is from wells, principally dug wells, a few bored ones, and a few springs. The water is generally cold and tastes well, but has not been analyzed this year.

NEWFIELDS.—No public water supply. Water all taken from wells or cisterns.

One of the two supplies examined was badly polluted; the other was suitable for use. For results see Nos. 562 and 563.

NEW HAMPTON.—No public water supply in town. Most of the water is taken from shallow wells, through lead pipe. Several persons have suffered from lead poisoning. Several samples of the water have been analyzed at the State Laboratory of Hygiene, and lead found in most of them.

Eight supplies were examined and five found to be unsuitable for drinking because of the quantity of lead present in the water. Aside from the presence of lead the waters were pure and quite suitable for

drinking. For results of analyses see Nos. 196, 225, 226, 330, 346, 418, 440, 465.

NEWINGTON.—No public water supply.

NEW IPSWICH.—No public water supply. Water is taken about evenly from wells and springs.

Three samples of water from this town have been analyzed, one of which was suitable for drinking and two dangerous because of the large amount of dissolved lead in the water. For results see Nos. 295, 572, 643.

NEWPORT.—The town owns and operates a system of water-works supplied by a pond, or lake, of sixty-six acres; average depth about thirty feet; bottom largely sand and rock. The watershed is about four or five square miles, about two-thirds wooded; three families reside thereon. It is a gravity system of $12\frac{1}{3}$ miles of distributing mains, cast iron; service pipes wrought iron and cement lined. About four hundred families, 50 per cent of the population, are consumers. There are also one or two individuals who sell spring water. There are many individual wells in the locality.

Chemical Examination of Water from Tap of Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
844	1902. Oct. 9	None	None	Veg.	0.1	6.90	1.20	.0000	.0048	.0000	.0004	.10	.90	.....	g

The water from six other supplies was examined. Of these three were good and three bad. For results see Nos. 466, 486, 519, 604, 655, 711.

NEW LONDON.—No public supply; water mostly from wells.

NEWTON.—No public water supply. Nearly every family has a well, some more than one. A few have no well, and depend upon neighbors for water.

One well has been examined and pronounced unfit for drinking purposes. See No. 214 in table of analyses.

NORTH HAMPTON.—No public supply. A charter is held by the North Shore Water Company, and the matter of supplying Little Boar's Head and Rye Beach with an ample supply of good water has been talked of for the past year, but as yet no well-defined plan has been reached.

NORTHFIELD.—No public supply. The Tilton & Northfield Aqueduct Company, a private corporation, instituted, some fourteen or fifteen years ago, a water supply, the source being a pond fed by springs. The land is cleared for some distance from the water, and there are no houses within one half mile. The water runs by force of gravitation in pipes to a reservoir. The distributing mains are of iron; service pipes, galvanized iron. There are not many individual wells in the vicinity.

Chemical Examination of Water from a Faucet of the Tilton & Northfield Aqueduct Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
11	1901. May 28	V. slight	Slight	Distinct veg.	0.2	3.40	1.30	.0019	.0150	.0000	.0000	.09	.....	.....	g
345	Dec. 31	None	None	None	0.2	2.90	1.20	.0044	.0136	.0050	.0000	.09	.90	.....	g

NORTHWOOD.—No water supply other than individual wells and springs.

Of the three supplies examined at the State Laboratory of Hygiene, two were found to be good, and one badly polluted. For results see Nos. 309, 321, and 388.

NOTTINGHAM.—No public supply. Water is obtained from wells and springs. Wells are dug from fifteen to thirty feet deep.

Two wells have been examined, and both pronounced unfit for use. See Nos. 138, 286, in table of analyses.

ORANGE.—No public supply. All the water is obtained from private wells or springs.

ORFORD.—No public supply. There are private supplies from springs, which furnish water to some thirty families. These springs are dug from six to eight feet deep, through sandy loam, subsoil rock. The water flows by gravity through iron and lead mains, with lead for service pipes. There

are no individual wells in the vicinity. There are several other private springs.

Chemical Examination of Water from the Wilcox Springs.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
766	1902. Sept. 2	V. slight	Slight floc.	None	0.0	5.60	4.30	.0000	.0000	.0000	.0000	.05	3.20	.....	g

Sample from a private tap was examined, and found to be excellent; also sample from tap at schoolhouse was found to be excellent water, with the exception of traces of lead. See Nos. 30 and 320 in table of analyses.

OSSIPEE.—There is no public water supply.

Of the four supplies examined, three were of good quality, one, spring water, was polluted and unfit for use. For results see Nos. 16, 386, 413, and 478.

PELHAM.—No public water supply. All the houses in town but two are supplied by wells, which are believed to be in good condition. The two exceptions are supplied from springs, through lead pipes to cisterns in the houses. The water is charged with carbonic acid, which prevents poisoning.

PEMBROKE.—No public supply. There are two private supplies. The Suncook water-works, built in 1896, is supplied from a pond having an area of twenty-five acres, fifteen feet deep on an average, and a very muddy bottom. No inhabitants within two or three miles. The water flows by gravity. There are nine miles of distributing mains, cast iron; service pipes of galvanized iron. About 50 per cent of the population are supplied from this source. The Baker & Dearborn water-works were built in 1895, the source being a spring and Suncook river. The latter receives all the sewage of Pittsfield, sixteen miles above. This river water is pumped to three reservoirs, 150 x 20, 50 x 20, and 50 x 20, and 9 feet deep respectively. The distributing main is one mile in length and is of wrought iron; service pipes of galvanized iron. About 10 per cent of the population take water from this supply. There are many private wells within the circuit of these two supplies.

*Chemical Examination of Water from Various Sources.**

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
743	1902. Aug. 25	None	one	V. slight	0.0	5.80	3.80	.0006	.0014	.0300	.0000	.40	3.80	.....	g
744	Aug. 25	None	None	Slight veg.	1.20	6.20	2.00	.0010	.0190	.0200	.0000	.15	1.90	.....	g

*Sample No. 743 is from a faucet of Baker & Dearborn Water-Works; No. 744, from a faucet of the Suncook Water-Works.

Two analyses of water from one private source have been made. Water organically good, but carrying lead. See Nos. 142 and 332 in table of analyses.

PETERBOROUGH.—In 1896 the town installed a water supply from a brook fed by springs. The watershed is three miles by one mile in extent, consisting of pasturage and woodland. It is a gravity system of approximately four miles of distributing mains, iron; service pipes of iron. Two hundred or more families, one fifth of the population, are consumers. There are quite a number of wells still in use, but they are gradually being given up.

Chemical Examination of Water from Tap of Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
851	1902. Oct. 10	None	None	Decided veg.	0.4	6.30	1.80	.0000	.0062	.0000	.0000	.12	1.80	.....	g

The water from twenty other supplies was examined. Ten supplies were found to be of good quality and ten were bad. Of the ten bad supplies nine were so reported because they contained lead in dangerous quantities. For results see Nos. 31, 65, 82, 308, 449, 511, 512, 517, 536, 555, 557, 641, 642, 656, 667, 691, 695, 696, 776.

PIERMONT.—No public supply. Nearly all the water used in town is obtained from springs on the hillside of sand and sandy loam. There are only nine wells in town. Lead pipe is used chiefly.

PITTSBURG.—There is no other water supply in this town than springs and a very few wells. Nearly every family has spring water.

PITTSFIELD.—No public supply. The Pittsfield Aqueduct Company installed a supply from a pond in 1884. It is a gravity system. There are eleven miles of cement-lined iron mains, while the service pipes are of galvanized iron. Two hundred and seventy-five families, 95 per cent of the population, take of this water. There are a few private wells in use.

One well was examined and found to be unfit for drinking purposes. See No. 298 in table of analyses.

PLAINFIELD.—No public supply. A private supply was introduced in 1890-91 by the Meriden Water Company. The source of the supply is springs dug from seven to ten feet deep, and flowing from ten to thirty gallons per minute. The watershed has an area of about one hundred acres, all cleared. The water flows by gravity to a reservoir 20 x 25 x 8 feet, and having a capacity of 1,000 barrels. The distributing main is $1\frac{1}{2}$ miles long, and this as well as the service pipes are plain iron. Twenty families, besides the hotel and boarding-house, are supplied from this source. There are many individual wells in the locality.

Chemical Examination of Water from Tap of Meriden Water Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
860	1902. Oct. 1	Marked	Much min.	Slight	0.1	10.00	5.00	.0000	.0000	.0000	.0000	.06	4.50	.....	g

PLAISTOW.—All of the water used in this town is obtained from individual wells.

One supply only has been examined at the State Laboratory of Hygiene, and that appeared to be slightly polluted, but was reported as probably suitable for drinking. See No. 530 in the table of analyses.

PLYMOUTH.—The town installed a system of water-works in 1880 and 1881, the supply being from springs and wells. The average depth of the wells is six feet. A foot of top soil is loam; below the loam is marl and gravel. The wells are dug. The water flows by gravity to two reservoirs having a capacity of 4,000,000 gallons; area, one acre; average depth, twelve feet. There are about six miles of distributing mains, one half cement, one half iron; service pipes are of galvanized iron. The average daily consumption is about 50,000 gallons. About three hundred families, 75 per cent of the population, are consumers. There are several individual wells in the locality.

Chemical Examination of Water from Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPORATION		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
627	June 30 1902.	V. slight	None	Veg.	0.25	8.00	3.10	.0000	.0054	.0000	.0000	.10	2.30	.....	*
629	June 30	Slight	Slight	Veg.	0.26	7.80	3.10	.0006	.0084	.0000	.0000	.12	2.30	.....	†
630	June 30	Slight	Slight	Decided veg.	0.26	8.10	2.00	.0006	.0120	.0000	.0000	.07	1.90	.....	‡
631	June 30	Slight	None	Decided veg.	0.26	6.40	2.50	.0000	.0072	.0000	.0000	.07	1.90	.....	§

* Sample taken from faucet in mill.

† Sample taken from Reservoir No. 2.

‡ Sample taken from Reservoir No. 1.

§ Sample taken from faucet in drugstore.

Samples from five private sources have been examined: one from tap, one from well, and three from springs. Three samples were of good quality; two were dangerously contaminated with lead. See Nos. 136, 626, 628, 659, and 722 in table of analyses.

PORTSMOUTH.—The city constructed a system of water-works in 1891, the source being wells and springs. The watershed is about four square miles in area, partly wooded; no inhabitants very near. The wells are driven from seventy to one hundred feet, in gravel. The water is pumped to a standpipe having a capacity of 500,000 gallons. There are about thirty miles of cast-iron distributing mains; service pipes are of galvanized iron. The average daily consumption is 1,500,000 gallons. Practically the entire population, 2,000 families, are consumers. There are very few private wells.

Chemical Examination of Water from Portsmouth Water Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
621	1902. June 27	None	Slight floe.	Slight aroinat.	0.0	10.40	8.80	.0000	.0018	.0150	.0000	.27	4.50	.....	g

Sample from one well has been examined, and reported unfit for drinking purposes. See No. 439 in table of analyses.

RANDOLPH.—No public water supply.

RAYMOND.—In 1893 the town installed a public water supply from a system of wells driven from forty to sixty feet deep, through loam, sand, and gravel. The water is pumped to a standpipe having a capacity of 118,037 gallons. The watershed is about one square mile in area, is about equally wooded and cleared, and on it are about six hundred inhabitants. The distributing mains, from three to four miles in length, are of iron; service pipes of galvanized iron. Eighty families, 80 per cent of the population, are consumers, the average daily consumption being 65,000 gallons. There are a few wells in the locality.

Chemical Examination of Water from Faucet of Raymond Water-Works.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
376	1902. Jan. 24	None	None	V. slight	0.0	11.90	8.50	.0010	.0064	.1900	.0000	1.62	4.20	.....	..

RICHMOND.—No public supply. Each family, as a rule, has its individual well. There is one well, however, that is owned by several neighbors for their own private accommodation, especially when other wells may be dry in summer. One hotel is supplied from a private well across the street, and from another in the hotel cellar.

One sample of water from this town was examined at the State Labor-

atory of Hygiene, and was found to be badly polluted. See No. 767 in the table of analyses.

ROCHESTER.—The Rochester water-works, owned by the city, installed in 1885, has for a source a pond and reservoir, the pond being about one hundred acres, and the reservoir two hundred acres in area. The watershed, several square miles in extent, is both wooded and cleared, with, perhaps, seventy-five inhabitants. The water flows by gravity through from fifteen to twenty miles of cast-iron mains; service pipes nearly all iron, some are lead. More than 90 per cent of the population are consumers of this water. There are not many private wells in the locality.

Chemical Examination of Water from Tap of City Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
878	1902. Oct. 17	None	None	Slight veg.	0.15	5.70	1.00	.0000	0086	.0000	0000	.15	.90	.....	g

The water from eight other supplies has been examined, and four supplies found badly polluted; three were potable and one was of doubtful quality. For results see Nos. 311, 319, 470, 482, 485, 615, 660, 688 in table of analyses.

ROLLINSFORD.—No public water supply, the only source being wells and springs, samples from many of which have been analyzed at the State Laboratory of Hygiene, and in a majority of cases found to be unfit for domestic use. There are a number of citizens who would be glad to see a system of water-works installed in the village.

Twenty supplies at Salmon Falls, in the town of Rollinsford, have been examined, and fourteen of the number found to be unfit for use. Six supplies were of good quality. For results see Nos. 250, 251, 252, 253, 263, 264, 265, 266, 287, 313, 314, 333, 334, 431, 432, 433, 441, 483, and 484.

ROXBURY.—No public supply. Some families use the old wells, but most of them are supplied with running water from the hills.

RUMNEY.—This town is supplied with water from private wells and springs.

Of the eight samples examined at the State Laboratory of Hygiene, three were found to be potable, two were of doubtful quality, and three were unfit for drinking purposes. Of the three polluted supplies, one was condemned because it contained lead in large quantities. See Nos. 205, 215, 216, 280, 438, 681, 682, and 683 of the appended table of analyses.

RYE.—No public supply. The entire water supply is taken from private wells and springs.

Two supplies only were examined, and both proved to be pure. For results see Nos. 105 and 692.

SALEM.—No public supply. The Salem Water-Works Company are putting in a system of water-works from Policy pond, partly in Windham and partly in Salem. The pond has an estimated area of eight hundred acres, with an average depth of forty feet (estimated). It is fed by springs, no streams entering it, and the bottom is gravelly. The watershed has a gradual slope, partly wooded and partly pasture. The water flows by gravity. The present water supply of the town is from private wells.

*Chemical Examination of Water taken from Policy Pond, otherwise known as Canobie Lake.**

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
228	1901. Oct. 27	None	Slight	Decided veg.	0.1	2.80	1.50	.0000	.0176	.0000	.0000	.21	1.20	.0000	g
229	Oct. 27	None	Slight	Decided veg.	0.1	3.00	1.20	.0000	.0192	.0000	.0000	.23	1.20	.0000	g

* Sample No. 228 was collected opposite Crosse's Grove; No. 229, opposite Chase's Grove.

Ten samples from private supplies, nine wells and one spring, have been examined. The spring had good water, two wells of doubtful quality, and seven bad. See Nos. 114, 115, 140, 199, 242, 338, 471, 515, 661, and 685 in table of analyses.

SALISBURY.—No public water supply.

Four supplies have been examined and all found bad. One supply was polluted by sewage, and three contained lead. For results see Nos. 163, 275, 693, 694.

SANBORTON.—No public water supply.

SANDOWN.—No public water supply.

But one supply of this town has been examined, and that, a well, was polluted and unfit for use. For result see No. 602.

SANDWICH.—No public supply. Practically every house has its individual well. Some of the water is conveyed through lead pipe.

Two wells, one polluted and unfit for use and the other of permissible quality, have been examined. See Nos. 41 and 217 in table of analyses.

SEABROOK.—No public water supply.

The one supply examined was found to be very badly polluted. For result see No. 262.

SHARON.—No public supply. Water is obtained entirely from springs and wells.

SOMERSWORTH.—A system of water-works was installed by the city in 1895, from Salmon Falls river, which received the sewage of East Rochester and the woolen mills there. The water is pumped to a standpipe having a capacity of 997,000 gallons. The distributing mains are cast iron; service pipes, galvanized iron. The average daily consumption is 626,000 gallons. There are 850 connections, representing about nine tenths of the population. There are several private wells within the radius of this supply, but many who have wells have city water also.

Chemical Examination of Water from Faucet of City Water-Works.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
60	1901. July 11	None	None	Decided veg.	0.7	4.50	2.50	.0074	.0167	.0050	.0003	.33	1.80	.....	..
497	1902. May 5	None	None	Veg.	0.5	4.00	1.90	.0006	.0056	.0200	.0000	.15	1.20	.....	..
585	June 11	None	None	Slight veg.	0.55	6.60	1.50	.0000	.0092	.0200	.0000	.14	1.20	.....	..
647	July 14	None	None	Decided veg.	0.6	4.70	2.20	.0000	.0098	.0200	.0000	.14	1.80	....	..
637	July 17	None	V. slight	V. slight	0.5	6.10	2.20	.0020	.0154	.0200	.0000	.15	2.20	.....	..
788	Sept. 9	None	None	Slight veg.	0.45	8.30	2.40	.0014	.0100	.0100	.0000	.15	2.40	.....	..

Many wells and springs have also been examined and, in a majority of cases, the water found to be unsuitable for drinking. For results see Nos. 61, 68, 391, 416, 527, 540, 547, 579, 580, 644, 645, 658, 673, 679, 680, 699, 700, 701, 702, 756, 757, 758, and 759.

SOUTH HAMPTON.—There is no public supply in town. Water for family use is all from wells. A few springs are used for barnyard and highway purposes.

SPRINGFIELD.—The water supply of this town is entirely from private wells and springs.

Of the two supplies examined at the State Laboratory of Hygiene, one was reported potable, and the other unfit for drinking. For results see Nos. 99 and 126 in the table of analyses.

STARK.—No public supply. Water is obtained from springs and driven wells.

STEWARTSTOWN, WEST.—No public supply. The Consolidated Water Company furnishes water to twenty-five families, the source being several springs and a few wells. Several shallow wells were dug on a hillside near the village, above which, and from thirty to fifty rods distant therefrom, are a few acres of wet, springy ground. The soil is a dark deposit, with gravel underneath. The quantity of water in the wells is not large. There is a reservoir of about 10,000 gallons' capacity, from which leads about one half mile of wrought-iron distributing main; service pipes are galvanized iron. There are still a few deep wells in the locality, dug from fifteen to twenty feet, on a level with the river, and which have good supplies of water.

STODDARD.—No public supply. Most of the families are supplied from individual wells; a few from Long lake.

STRAFFORD.—No public supply. Water is obtained from individual wells, the pipes used being partly lead and partly galvanized iron.

STRATFORD.—No public supply. The village of North Stratford has two private water supplies. In 1882 Mr. Clark Stevens installed a supply from a system of springs, the watershed being about sixty acres, mostly cleared land; no inhabitants. The springs are seven in number, stoned from five to seven feet deep. The top soil is loam, gravel below loam to bottom of wells. The water flows by gravity through about $1\frac{1}{2}$ miles of galvanized iron mains; service pipes also galvanized iron. There

are two private wells within the circuit of this system. In 1888 Mr. J. C. Hutchins introduced a second supply, also from springs stoned about six feet deep, with same kind of soil as first supply. The watershed is about five square miles in area, mostly cleared land; no inhabitants. The water flows by gravity through three miles of distributing mains of galvanized iron; service pipes, galvanized iron. There are two private wells within the radius of this supply. About 98 per cent of the population are served from these two systems.

*Chemical Examination of Water of Stratford.**

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
800	1902. Sept. 11	None	None	None	0.0	5.60	2.20	.0010	.0030	.0150	.0000	.05	1.90	.....	g
801	Sept. 13	None	None	None	0.0	6.10	2.10	.0000	.0000	.0200	.0000	.05	2.00	.....	g

* Sample No. 800 was taken from faucet of J. C. Hutchins' water supply; No. 801, from faucet of Clark Stevens' water supply.

STRATFORD HOLLOW.—No public supply. Water is obtained from individual wells and springs.

STRATHAM.—No public supply. There is one private supply, pumped by windmill from a spring to an out-of-doors tank, from which four houses are supplied. The water supply of the town is chiefly from individual wells and springs. A few filtered cisterns are used.

SULLIVAN.—Individual wells and springs are the only water supply.

SUNAPEE.—The Sunapee water-works, owned by the town, were built in 1901, Sunapee lake being the source from which water is taken to supply the Sunapee village, and Ledge pond for George's Mills. Water from the pond flows by gravity, while that from the lake is pumped to a reservoir of 300,000 gallons' capacity. There are about three miles of 4-inch, 6-inch, and 8-inch iron distributing mains; service pipes, inch and $\frac{3}{4}$ -inch, are of galvanized iron. The average daily consumption, by fifty families, is 30,000 gallons. There are many private wells within the circuit of these supplies. The Lake Sunapee Water Supply Company, a private company of twenty-three stock owners and takers, in-

stalled its works in October, 1886. The water is taken from Sunapee lake, and flows by gravity. The plant is nearly worthless at this time, as the pipes are of small size and filled with rust.

Chemical Examination of Water from Lake Sunapee.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
306	1901. Dec. 4	Slight	Much floc.	Decided veg.	0.6	3.00	1.80	.0000	.0094	.0000	.0000	.08	1.50	.0400	* g
823	1902. Sept. 22	None	Slight	Slight musty	0.1	3.50	.60	.0000	.0112	.0000	.0000	.07	.60	.....	† g
824	Sept. 22	None	V. slight	Decided veg.	0.15	3.40	.70	.0000	.0090	.0000	.0000	.10	.60	.....	† g

* Sample taken from private supply through 150 feet of lead pipe.

† Sample taken from Ledge Pond, George's Mills water supply.

‡ Sample taken from Lake Sunapee, supply of Sunapee Water-Works Company.

Of the four private supplies examined, one was of doubtful quality, and three were suitable for drinking. For results see Nos. 240, 273, 496, and 651 in the appended table of analyses.

SURRY.—No public supply. Water is obtained from wells dug about three feet deep, on a hillside, and are fed by springs. The water flows by gravity about one mile, through lead pipe. Fourteen families are so supplied.

SUTTON.—The water used in this town is obtained from private wells and springs. Some wells are near buildings, and pumps are used; in other cases the water is conducted through lead pipes from springs back in the hills.

Samples from twelve supplies have been analyzed at the State Laboratory of Hygiene, of which nine were found to be badly polluted; one was of doubtful quality; and the two others, which contained slight amounts of lead, were reported as doubtful. Two of the polluted waters were so reported because of the large amount of lead they contained. For results in detail see Nos. 14, 67, 169, 195, 302, 318, 329, 490, 493, 549, 639, and 678 in the table of analyses.

SWANZEY.—No public supply. A private supply at West Swanzev furnishes water for four or five families from a small reservoir fed by springs, but the water is not used to any extent for drinking.

The one supply examined was somewhat polluted, but was probably safe. For result see No. 690.

TAMWORTH.—No public supply. Water is obtained from individual springs and wells.

TEMPLE.—No public and no private system of water-works. Water is obtained from individual springs, which flow by gravity, and from wells.

THORNTON.—No public supply. Water is obtained from springs and wells, through lead and iron pipes.

TILTON.—No public supply. A private supply was installed by the Tilton & Northfield Aqueduct Company in 1887-88, the source being a pond of about sixty acres in area, from ten to seventy-five feet deep; sand and gravel bottom, with but very little mud. The watershed is several hundred acres in extent, wooded and pasture, with five farms. The water flows by gravity, through about ten miles of distributing mains, cement lined and cast iron; service pipes of galvanized iron chiefly. Four hundred or more families, 75 per cent of the population, are users. There are still a very few wells in the locality, most of them having been abandoned.

Chemical Examination of Water from a Faucet in Tilton Supplied by the Tilton & Northfield Aqueduct Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
11	1901. May 28	V. slight	Slight	Distinct veg.	0.2	3.40	1.30	.0019	.0150	.0000	.0000	.09	.....	.....	g
345	Dec. 31	None	None	None	0.2	2.90	1.20	.0044	.0136	.0056	.0000	.09	.90	.....	g

Samples from three wells have been examined: two were pronounced good, and one bad. See Nos. 109, 123, and 677 in the table of analyses.

TROY.—No water supply other than individual wells and springs.

Of four samples examined at the State Laboratory of Hygiene, two were condemned because of the large amount of lead they contained. For results see Nos. 210, 276, 277, and 601 in the table of analyses.

TUFTONBOROUGH.—No public supply.

UNITY.—No public water supply. The people are supplied with water chiefly from wells. A few have running water from individual aqueducts. It is believed that many of the wells furnish poor water.

One spring supply was found to contain a large amount of lead. For result see No. 776.

WAKEFIELD.—No public supply. There are two driven wells in town; the others are dug and are not more than fifteen to twenty feet deep, on an average.

Six samples of water from this town have been examined at the State Laboratory of Hygiene, of which five were pronounced good and one of doubtful quality. See Nos. 632, 635, 636, 654, 792, and 793 in the table of analyses appended.

WALPOLE.—The North Walpole Village Precinct Water-Works, owned and managed by the precinct named, was installed about thirty-five years ago by Nathaniel Monroe. There are four springs; one, flowing twenty-five gallons per minute, is pumped to a reservoir; three others run into cement-lined pipes and supply eighty-four families, and have a capacity for thirty more. The soil is fine gravel. There are about six miles of iron and cement mains, while the service pipes are lead and iron. Two hundred and forty families are supplied from this source. There are a few wells in this precinct. The remainder of the town of Walpole is supplied from private wells and springs.

Samples from two wells and a cistern have been examined. The cistern water was reported acceptable for drinking; the two well waters as polluted and unfit to drink. For detailed results see Nos. 171, 481, and 1621 in table of analyses.

WARNER.—No town supply. In 1895 a supply was introduced by private parties, which was later purchased by the Warner Village Fire District. This consists of a reservoir supplied by springs and a brook. The bottom is clayey hardpan in part, and part gravel; average depth, eight feet. The watershed is estimated at four hundred acres, wooded; not more than twelve inhabitants. The volume of water varies greatly. During the last drought the stream became dry, but the springs afforded sufficient water for all purposes. The water flows by gravity. There are four miles of cast-iron mains, while the service pipes are of galvanized iron. The supply is not metered. Sixty families, approximately 40 per cent of the population, are consumers. There are quite a number of private wells in the locality. There are many private supplies which are piped from springs long distances through lead pipe.

An examination of several of these waters has shown lead present in greater or lesser quantities. For detailed results see Nos. 12, 13, 518, 522, 675, 717, 731, 732, 754 in the table of analyses.

Chemical Examination of Water from a Faucet of the Village District Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
754	1902. Aug. 29	None	None	V. slight	0.3	5.30	2.00	.0000	.0110	.0000	.0000	.10	1.50	.....	g

WARREN.—No public supply. There are two private systems of water-works in town: one, the Warren water-works, was built in 1873, the source being a spring about a mile distant. The water flows by gravity through galvanized iron pipe. Nineteen families are supplied from this source. The other supply, the H. N. Merrill water-works, was installed about the year 1895. This supply is from a spring, and driven well 474 feet deep. The water flows partly by gravity and partly by being pumped into a reservoir. The distributing main, iron, is about a mile in length; service pipes galvanized iron. Eighteen or twenty families take from this supply. There are not many private wells within the radius of these supplies.

Chemical Examination of Water from Various Sources.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
875	1902 Oct. 17	Slight	Fine	V. slight	0.1	7.20	2.60	.0000	.0116	.0000	.0500	.09	1.95	.....	g
877	Oct. 17	None	None	Slight veg.	0.1	6.50	2.70	.0000	.0038	.000	.0000	.10	2.70	.....	g

* Sample No. 875 is from H. N. Merrill Water-Works; No. 877, from Warren Water-Works.

One well and one spring have been examined. The well was pronounced bad; the spring of excellent quality. For results see Nos. 131 and 132 in table of analyses.

WASHINGTON.—No public water-works. The town being quite hilly, a great many families have put in private aqueducts at comparatively small expense. It is probable that nearly or quite half the farms have aqueducts supplying house, or barn, or both. Lead pipe has generally been used to conduct the water, although of late iron pipe has been employed to some extent.

Four samples, one from tap, three from wells, have been examined. Three were reported unfit for use; one permissible. See Nos. 5, 176, 191, 609 in table of analyses.

WEARE.—No public water supply. Four families at Riverdale are supplied from a spring, by lead pipe. The works were put in about sixty years ago by Christopher Simons, who supplied the village with excellent water. Later, the owner of the spring asked several parties to put their faucets on a level with his; they would not. He cut the pipe and laid a new line to supply the four families mentioned. The others now depend upon wells. At North Weare four families get water from a spring, through pipe not lead. Wells are generally used, although quite a number in town have running water from springs.

Two spring supplies, the Mineral spring at North Weare, and Cold spring at South Weare, were of excellent quality. One well examined was found to be polluted. For results see Nos. 75, 139, and 243.

WEBSTER.—No public water supply. Water is supplied by private works from springs and wells.

One private supply has been examined and found to be excellent in quality. For result see No. 445.

WENTWORTH.—There are no public water-works in town. The supply is from wells and springs.

WESTMORELAND.—No public supply.

WHITEFIELD.—The public water-works, owned by the town, were built by private parties in 1892. The water is from streams, and flows by gravity to a reservoir having a capacity of 800,000 gallons. There are two watersheds of about thirty acres each. There are about $3\frac{1}{2}$ miles of distributing mains, cast iron; service pipes of galvanized iron. About three hundred families, 75 per cent of the population, are consumers. The remainder obtain water from individual wells.

Chemical Examination of Water from Town Supply.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA	NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.	
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.					Nitrites.
861	1902. Oct. 14	None	Slight floc.	Veg.	0.0	5.03	1.50	.0000	.0026	.0000	.0000	.04	1.50	.....	g

One well supply was examined and found to be unfit for use. For results see No. 108 in table of analyses.

WILMOT.—No public and no private water-works. The supply of this town is from individual springs or wells.

WILTON.—No public supply. There are two small private supplies from springs, in both cases dug not over eight or ten feet deep, through sand or gravel; some clay in spots. Water flows by gravity less than a mile, through lead service pipes and main. About twenty-five families are so supplied. This town is situated in a valley, and the hills all around are full of excellent water. Most of the houses are supplied from individual springs. All are shallow, from six to ten feet deep.

Water from fourteen of these springs has been analyzed, and of that number but four were found suitable for drinking. Of the ten polluted supplies, five contained lead in greater or lesser amounts, sufficient to condemn them. For detailed results see Nos. 122, 180, 197, 209, 244, 288, 310, 350, 475, 487, 553, 582, 612, 618, 730 in the table of analyses.

WINCHESTER.—No public water supply.

WINDHAM.—No public supply.

WINDSOR.—No public supply. Most of the water is taken from wells dug from fifteen to twenty feet; soil mostly heavy loam; subsoil, clay or hardpan. One well, twelve feet deep, is through light soil, gravel subsoil. One spring is about three feet deep; soil same as last. Nearly all the water is drawn with copper pump through lead pipe. One is supplied by gravity through lead pipe, and one by open bucket.

WOLFEBOROUGH.—The public water-works, owned and operated by the town, were installed in 1889. The source of the supply is a pond of about three hundred acres; depth in places from sixty to seventy feet; average

for the pond about thirty-two feet; bottom mostly sand, with small rocks. The watershed is from three to four square miles in extent; five sevenths woodland, two sevenths pasture; only one family inhabits the watershed. The pond is fed by several large springs, with large and constant flow. The water flows by gravity through 14.69 miles of distributing mains; $9\frac{1}{8}$ miles cast iron; $5\frac{1}{2}$ miles wrought iron. Service pipes are mostly of galvanized iron. About 1,200 persons, 557 faucets, are supplied from this source. There are, perhaps, twenty private wells within the circuit of this supply.

Chemical Examination of Water from Public Fountain.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
842	1902. Oct. 9	None	None	slight musty	0.0	3.90	1.40	.0000	.0068	.0000	.0000	.07	1.30	.....	39

Three other supplies were examined, of which two were bad and one was good. For results see Nos. 35, 36, 37.

WOODSTOCK.—In 1897 the North Woodstock Water Company installed a system of water-works, which was sold to the town of Woodstock. This is in the precinct of North Woodstock. The source is a stream dammed to form a reservoir of about one acre. The water flows by gravity through $2\frac{3}{4}$ miles of cast-iron mains; galvanized iron service pipes. The average daily consumption is about 8,000 gallons, not including summer hotels. Seventy families, 99 per cent in the precinct, are takers. There are no wells in the precinct. The town of Woodstock is about evenly divided into the northern and southern portion. The latter is supplied with water from private wells and springs, and since the removal of all lead pipe, etc., it seems to be of good quality.

WOODSVILLE.—Woodsville Fire District is supplied with water by the Woodsville Aqueduct Company, whose plant was installed in 1885, by James Gordon, who introduced water from Gordon spring in 1892 or 1893. The first-named supply is from Ammonoosuc river, which receives all the sewage from the towns of Bath, Lisbon, and Littleton, farther up the river. The water is pumped directly from the river and flows through about three miles of distributing mains, iron. This company also sup-

plies water from a spring, dug about four feet deep, which yields about 50,000 gallons daily, delivered through two miles of lead pipe. Soil is mucky loam, with sandy bottom. About nine tenths of the population are supplied from these sources. Gordon spring is about two feet deep, while the volume of water is about 48,000 gallons daily; soil, mucky loam, with sandy bottom. One half mile of galvanized iron pipe is used to convey this water. Thirty-three families take from this supply. There are twelve or fifteen driven wells in the locality.

Chemical Examination of Water from Supply of Woodsville Aqueduct Company.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
17	1901. June 3	None	Cons. flocc.	Slight veg.	0.1	3.60	1.20	.0014	.0057	.0066	.0000	.13	.....	.....	*g
18	June 3	None	Much flocc.	Slight veg.	0.1	4.10	1.70	.0046	.0093	.0066	.0000	.13	.....	.....	†g
19	June 3	None	Slight	Slight veg.	0.1	3.70	2.20	.0004	.0057	.0066	.0000	.13	.....	.....	†g
57	July 9	None	Flocc. veg.	Decided veg.	0.12	5.00	2.00	.0009	.0104	.0050	.0002	.26	2.00	.....	†g
58	July 9	None	None	Veg.	0.10	4.70	2.10	.0032	.0104	.0050	.0002	.20	.....	.....	†g
59	July 9	None	Much flocc. veg.	Decided veg.	0.12	4.70	2.20	.0032	.0135	.0050	.0002	.20	.....	.....	*g
159	Sept. 12	None	None	Decided veg.	0.15	5.10	3.30	.0016	.0112	.0000	.0000	.19	.....	.....	†g
160	Sept. 12	None	Flocc. veg.	Decided veg.	0.15	5.60	2.60	.0026	.0126	.0000	.0000	.19	.....	.....	†g
404	1902. Feb. 13	None	V. slight	Veg.	0.1	5.80	3.40	.0006	.0070	.0203	.0000	.10	1.60	.....	†g

* Sample taken from intake, Ammonoosuc River.

† Sample taken from tap at Thayer's house. ‡ Sample taken from tap at Whitcher's store.

This water is somewhat polluted by the sewage which enters the Ammonoosuc river above Woodsville, at Bath, Lisbon, and Littleton. The amount of sewage present is somewhat greater during the summer and fall, when the flow of water is the least. Samples taken during the winter months show but slight pollution.

LEAD POISONING AS RELATED TO WATER SUPPLIES.

Lead pipe has been always a favorite medium for conveying water from the supply to the consumer, because of the ease with which it can be made, its resistance to corrosion, and its adaptability to use. The supplies of Rome were frequently conducted through lead, and specimens of the pipe they made two thousand years ago are still in existence and capable of service.

The one great objection to the use of lead pipe is that it is somewhat soluble in certain waters, and lead, when taken into the system, acts as a cumulative poison. Lead poisoning is a complaint which may imitate almost any other complaint, and it is a practical point to know that it is common in New Hampshire, doing immense damage to health, but very generally unrecognized and unsuspected.

Acute lead poisoning, as manifested by lead colic, anæmia, paralysis, epilepsy, etc., is rarely met with as a result of the use of leaded waters, but the insidious forms of plumbism, or lead poisoning, which are very much more common than the acute cases, are constantly with us. The effects produced by the small amounts of lead taken into the system are rarely so serious as to cause death, and for this reason the injurious results of the long-continued use of waters so polluted are only gradually receiving recognition. As lead poisoning is not often registered as a primary cause of death it does not make a show in the death list, but there is no doubt that the death rate is increased by its prevalence. But even if no death could be ascribed to lead poisoning, the amount of pain, suffering, and misery caused is widespread and can only be appreciated by the sufferers. It is believed by those who are lucky enough to escape, that the risks of this kind of poisoning are exaggerated. The contrary is quite the case.

The indications of chronic lead poisoning, such, for example, as are liable to ensue after the continuous use of water containing small quantities of lead, are as follows: The symptoms are usually slow in their progress; there is generally anæmia, with a consequent anæmic pallor of the skin; there is often constipation and indigestion; there may be a loss of appetite, an unquenchable thirst, a constant unpleasant metallic taste in the mouth, and a foul odor in the breath; the countenance becomes dull and appears anxious; there is rarely any fever and the pulse is usually natural; the respiration is often rapid; there is frequently abdominal hardness and pain, the pain increasing as the case progresses, colic being the most common symptom.

Occasionally lead paralysis is manifested; the upper extremities, and especially the extensor muscles, are most commonly attacked, those of the

wrist and forearm suffering first. The chief diagnostic sign is the blue line upon the gums at the margin of the teeth, due to the formation in the capillaries of the gum of sulfid of lead. This blue line is by no means always present, however. The presence of lead in the urine constitutes a valuable diagnostic symptom. In mild cases the prognosis is usually favorable when the exciting cause has been removed; but in severe cases, and especially where paralysis exists as a consequence of lead poisoning, the injury may be permanent, and occasionally prove fatal.

The State Board of Health of Massachusetts* has been very active in the investigation of lead poisoning and its results are conclusive. The city of Lowell has been closely connected with the investigation, as the ground water of that city dissolves lead in dangerous quantities, and, as a consequence, lead poisoning has always been prevalent there. In 1899 an investigation disclosed an alarming condition of affairs, with many acute cases of a very serious nature, and, as a result of the investigation, the old supply was abandoned and a new one secured. Many valuable facts were brought out in the investigation. Wrist drop, constipation, and marked debility were the most common symptoms, and were produced by the use of water containing as little as .01 part of lead per 100,000. When the use of the water was discontinued and the proper remedies applied, the patient usually made a good recovery.

During the past year we have been frequently called upon to examine waters for the presence of lead, and the frequency with which it was found prompted us to examine all waters for lead where there was any reason to think that the water had flowed through lead pipe.

Samples of water from 177 supplies were examined for lead and in 135, or 76 per cent, of the cases it was found to be present. These results had such an alarming significance that it was thought best to make special investigations of all the cases where lead was found. It was decided to call upon the physicians of the state for their assistance and the following letter was sent to those who had collected samples of water containing lead:

LABORATORY OF HYGIENE,

CONCORD, N. H.,

DEAR DOCTOR,—Since the work at the Laboratory of Hygiene on waters which are conveyed through lead pipe shows lead present in over 50 per cent of such waters, and as in many cases lead poisoning has resulted from the use of the waters, it seems advisable to investigate more thoroughly each case where we have found lead present.

In this work we rely on your co-operation, and trust you will furnish us such facts as seem of importance.

*Report of the State Board of Health of Massachusetts in 1899, page xxxi.

Some time ago we found that a sample of water collected by you from the supply of contained lead to the amount of parts per 100,000.

Can you ascertain whether any ill effects had been noticed by persons habitually using the water? And, if so, will you describe any symptoms of lead poisoning, such as the blue line on the gums, lead colic, wrist drop, etc., that you have observed?

Have you treated any patients for lead poisoning, and with what results? Has the disuse of water containing lead resulted in an improvement in the health of persons who have had symptoms of lead poisoning?

Any other facts concerning cases of lead poisoning from the use of leaded waters will be of much value to us.

Thanking you in advance for the information you may give us, I am,

Yours very respectfully,

H. E. BARNARD,

Chemist.

The response to our application was most gratifying, and from the many communications received the following letters are selected as showing very clearly the usual symptoms observed in cases of lead poisoning, the severity of the attacks, and the treatment employed.

FRANKLIN FALLS, N. H., July 5, 1902.

H. E. Barnard, Chemist Laboratory of Hygiene:

DEAR SIR,—Your letter asking for information regarding lead poisoning from water collected by me received. The sample sent was numbered 411 and contained .022 parts of lead per 100,000. This was from a spring in which I have one fifth interest, and comes to my house. This spring water has been used by five families without any apparent trouble, but I used it only a short while when I began to detect symptoms of lead poisoning, and I myself was the victim. I then sent the water to the laboratory, with the result of which you have a record.

I have under my treatment at the present time four cases. In one case colic is quite frequent, wrist drop and bleeding from the nose; in another, very marked neuritis, also involving the extensor muscles. The others do not vary from the ordinary.

Disuse of the water and treatment show rapid improvement.

It is very singular that in families of four or five only one shows any symptoms of lead, while they all use the same water.

In the cases which came under my observation, the first symptom to disappear was severe colic.

Respectfully,

A. A. BEATON, M. D.

MILFORD, N. H., June 9, 1902.

H. E. Barnard, Chemist, Concord, N. H.:

DEAR SIR,—Replying to your favor of June 7, asking for information concerning samples Nos. 92, containing 1.7 parts, and 130, containing but .004 parts of lead per 100,000, both samples came from waters which were habitually used for drinking and cooking purposes. In both cases I was called upon to treat patients for what I believed to be lead poisoning. This led

me to have the waters analyzed by you, and you confirmed my diagnosis. The patients exhibited the usual symptoms of lead poisoning, viz., blue line on gums, cramp pains, constipation, wrist drop, etc. The use of the water was discontinued and the usual remedies given, and good recoveries resulted in each case.

Very truly,

H. S. HUTCHINSON, M. D.

ANDOVER, N. H., July 4, 1902.

H. E. Barnard, B. S.:

DEAR SIR,—In reply to your letter of June 10, concerning case of lead poison from use of water No. 477, containing .54 parts of lead per 100,000, I will report as follows:

One man was sick from lead poisoning. There can be no mistake in diagnosis. I have had one other case of lead poisoning from use of water containing lead. Both cases have nearly recovered. One case had blue lines on the gums, together with very severe colic. The use of the water was abandoned as soon as lead poisoning was suspected. I have treated other cases in years past.

Respectfully,

H. A. WEYMOUTH, M. D.

MILFORD, N. H., June 11, 1902.

H. E. Barnard, Chemist Laboratory of Hygiene:

DEAR SIR,—Replying to yours of the 7th inst., I will say I treated a patient in Hancock who had been using the water sent for analysis. He had lead colic. Disuse of the water and treatment produced relief from cramps, from which he had been an occasional sufferer for some time.

Yours truly,

E. H. TAFT, M. D.

Dr. Taft writes at greater length under later date, as follows:

MILFORD, N. H., September 12, 1902.

H. E. Barnard:

DEAR SIR,—In regard to cases of lead poisoning, I have sent three samples of water for analysis which proved to be contaminated with lead. In the families using the water were two persons suffering from marked colic and slight abdominal pains, with stomach trouble simulating carcinoma. Their troubles began to disappear when use of the water was stopped and appropriate treatment begun. In another family one patient had colic, another had colic and rheumatism and headache. These two were the women of the family. The men who drank less of the water had slight gastric troubles. Improvement in every case followed when a new water supply was procured.

Another case had been drinking the water for five years with increasing stomach trouble. These are all my cases up to date.

Yours,

E. H. TAFT, M. D.

KEENE, N. H., July 16, 1902.

H. E. Barnard, B. S.:

DEAR SIR,—Your letter of last month is before me and I regret that I have been unable to answer it earlier. In regard to the family who were using

the water, numbered 521 in your laboratory, which you examined and found to contain 3.3 parts of lead per 100,000, I can state that a decided improvement in the patient's condition was soon noticed after withholding this water as a source of supply for drinking purposes. This improvement has remained permanent. This patient began using the water in August, 1901, and in two months had a slight attack of colic. In December he had an attack of abdominal pain of a colicky nature for three days, combined with constipation, but he continued to work. In January, 1902, another attack about the same, except that the constipation was more severe. In March he had a more severe attack and called for medical aid. I found a man of about twenty-five years of age, anæmic, with severe abdominal pain, a little temperature, and badly constipated. He was in bed five days, and all symptoms except anæmia improved. In April I was called again and found him in a similar condition, except pain more steady and intense and a blue line on the two lower middle incisors. He was in bed eight days, feeling better as soon as bowels were freed. He is now in good condition, with a good color, no constipation, and says he feels as well as he ever did in his life. It is interesting to note that his wife had two attacks of colic and was constipated. His child of three years slowly became constipated and was slowly losing color. A baby born in February was slightly constipated at first but slowly contracted an obstinate constipation, especially after it began to take water between its feedings. Mother and two children are nicely, good color, and bowels acting normally.

I take this opportunity to thank you for the work done, and assure you it has been a great help to me in relieving this family.

Most respectfully yours,

JOHN D. PROCTOR, M. D.

NEWPORT, N. H., June 13, 1902.

H. E. Barnard, Chemist:

DEAR SIR,—In reply to your request for a clinical report of the case which prompted me to send you a sample of water to be analyzed for lead, and which you found to contain 1.1 part of lead per 100,000, I have to say that the patient is the sole user of the water, and she has wrist drop and partial paralysis of the hands and legs. No blue line on gums has yet been noticed.

Mrs. B. B. has been sick for some time and her case has been diagnosed by other physicians as cancer of the stomach, etc., etc.

The water is not being used at present.

Yours fraternally,

H. L. STICKNEY, M. D.

TROY, N. H., June 19, 1902.

H. E. Barnard:

DEAR SIR,—Replying to your recent communication regarding lead in water and its symptoms as observed, will say that I have had quite an experience with cases of lead poisoning, having had a large number of cases during my practice here. The water from which sample was sent you last fall supplied five families, some members in each of which were complaining of headaches, dyspeptic symptoms, rheumatic pains, constipation and diarrhea; but none had the wrist drop, or obstinate constipation, or lead colic. The sample I sent this week I found to contain lead, and Mrs. H has been complaining of pain in her feet and limbs with backache and some pain in

arms. I put her upon treatment and she is now nearly free from pain. All of these persons improved in health as soon as they left off the use of the water.

M. T. STONE, M. D.

FRANKLIN, N. H., June 9, 1902.

DEAR MR. BARNARD,—Referring to your analysis of water from a tap, numbered 76, which showed lead to be present to the extent of .015 parts per 100,000, I can state that a person using the water suffered from lead colic. Since leaving off using the water he has been much better. There was no blue line on gums or wrist drop.

Very truly yours,

E. T. DRAKE, M. D.

Under a later date Dr. Drake writes concerning another case: "The lady of the house where I took this sample has symptoms of lead poisoning, and I shall of course discontinue the use of the water and report later concerning results."

MARLBOROUGH, N. H., June 13, 1902.

H. E. Barnard, Concord, N. H.:

DEAR SIR,—With regard to laboratory No. 463 and No. 561, containing respectively .028 parts of lead per 100,000 and .013 parts of lead per 100,000, I would say that those using the water had slight symptoms of lead poisoning, such as colicky pains. When they ceased to use the water, these symptoms disappeared.

Yours truly,

W. H. ALDRICH, M. D.

MARLOW, N. H., September 20, 1902.

Mr. H. E. Barnard:

DEAR SIR,—Yours of September 17 received. I will give you what information I can and refer you to ——— under whose direction we sent the water and who pronounced Mrs. G's trouble lead poisoning. The water pipe had been down seventeen years, and no trouble was observed, so far as we know, until about five years ago Mrs. G began to be troubled with numbness and pain in the right hand. Several doctors were consulted and decided that she was suffering from nervous trouble and rheumatism. However, they failed to benefit her till Dr. C told her to stop using the water. Since then she has been much better.

Yours respectfully,

G. F. G.

NEW HAMPTON, N. H., June 10, 1902.

Prof. H. E. Barnard, Concord:

DEAR SIR,—Yours of recent date is at hand. I remember but one case of lead poisoning, and that a rather recent one, which seems to have its origin in leaded water. This was an aged woman who was afflicted with rheumatism, which made it difficult to determine how much of her trouble was due to lead. She had had, some years before, what was diagnosed as lead poisoning and treated accordingly, with recovery. While under my care she has had some colicky pains in the abdomen, with constipation, but no blue line upon the gums was discovered. She discontinued the use of the suspected water and the pains disappeared under treatment, but wrist drop, which was quite marked, persists.

Yours very truly,

ALBERT A. DOLLOFF, M. D.

In addition to the communications from physicians the following cases are of interest in showing what slight amounts of lead are necessary to produce lead poisoning:

Case No. 122. Indications of lead poisoning; .24 parts of lead per 100,000. No. 142. Marked case of lead poisoning. Total paralysis of lower limbs. Lead in urine. There were .21 parts of lead in the water per 100,000. No. 144. Case of lead poisoning; 1.1 parts of lead per 100,000. No. 196. Paralysis, limbs below knees give out, liable to drop anything from hands, colic pains, no lead line; .16 parts of lead per 100,000. No. 202. Lead poisoning; .16 parts of lead per 100,000 in the water. No. 225. Numbness and weakness of limbs below the knees; .055 parts of lead per 100,000. No. 240. Hands swollen and painful; .008 parts of lead per 100,000. No. 306. Hands and arms numb; .04 parts of lead per 100,000 in the water used,—and so on through the list.

Referring again to the summary of results of analyses, it appears that in *seventy-four* cases the result of the examination corresponds with the diagnosis of the physician or the fears of the consumer of the water. In *forty-two* cases lead was suspected but was not found, and in *thirty-nine* cases it was found where it was not suspected.

In 117 cases where lead was present in quantities varying from .004 to 3.3 parts per 100,000 in 64, or practically 55 per cent of the cases, marked symptoms of lead poisoning developed in the users of the water.

Natural waters rarely contain lead, and probably never in a sufficient quantity to produce any evil effects; but certain waters, both hard and soft, containing very little or no alkaline carbonates, dissolve traces of the metal when conveyed through lead supply pipes. A careful and complete investigation of the effects of different waters on lead pipe has been recently carried out at the laboratories of the State Board of Health of Massachusetts, and their results show that in most cases the clear and practically colorless supplies containing the most free carbonic acid and a small or medium amount of mineral matters, as shown by the hardness of the water, are the ones which most actively attack lead. Certain mineral matters, such as chlorine, silica, and calcium carbonate, prevent action not only by forming a coating on the pipes but by their simple presence in the waters. It will be seen by these investigations that the purer and softer a water the greater its solvent action on lead.

New Hampshire springs and surface or shallow well waters are exceptionally pure in their original condition, carrying few solids and having a low hardness. They are thus more energetic in their action on lead than if of a lesser degree of purity, and while the user has the satisfaction of drinking sanitarially pure water he runs the greater chance of charging his system with lead.

When lead pipe is in use great care should be taken that the water is

not allowed to stand in the pipes, but is delivered to the user in a constantly flowing stream. If, however, it is impossible to allow the water to flow continuously, the pipes should be emptied before drawing water for use.

In no case coming under observation had the water stood in the pipes for any length of time, and all lead dissolved had been abstracted during the continuous passage of the water from its source to the tap or barrel from which it was drawn. If the water had stood in the pipes much greater amounts of lead would have been found. In cases which we have noticed, water on standing in pipes over night contained from two to twenty times as much lead as was found in the running water. In many observed cases of lead poisoning it has been found that the patient had been in the habit of drawing off water in the morning for drinking without first taking the precaution of emptying the pipes of the water which had been standing in them during the night. But even when the water is running constantly, results obtained at our laboratory, and elsewhere, show that varying amounts of lead will be dissolved, and may in time so charge the system of the user that positive ill effects are observed.

The amount of lead necessary to impair health cannot be determined definitely. The greatest variations are observed in individuals, and where in one case a large quantity of lead will produce no apparent ill effects, in another case the minutest quantities may in time cause lead poisoning.

The fact that waters from lead service pipes have been in use for years with no resulting sickness in the user is no reason for supposing that there never will be trouble. The systems of those who drink it may not be responsive to small quantities, but if there is constant accumulation the danger line may be reached and serious results follow.

The problem of eradicating lead poisoning from this state is a most difficult one. The remedy would seem to be a substitution of the lead service pipes by other kinds of pipe which are not readily acted upon by the water. In many cases, however, the cost of changing from lead to suitable pipe is prohibitive, and the abandonment of the supply would mean a return to the sewage polluted well. It has been suggested that the addition of small quantities of lime to the water will prevent solution of the lead, and by forming an insoluble coating of carbonate of lime on the inside of the pipe, protect it from further attack.

*It is also stated that filtration through animal charcoal is a means of removing the greater portion of any lead suspended or dissolved in the water. Such filters must of necessity be renovated from time to time.

In any case where lead pipe is used as a conveyer of water for drinking and domestic uses, the water should be examined, and if lead is found in any quantity the supply should be brought through some form of iron pipe or shut off entirely.

EXAMINATION OF WATER AND ICE.

During the winter of 1901-1902 it seemed advisable to examine samples of ice taken from various supplies in the state. At the same time analyses were made of water taken from the same sources. In every case the ice was of much better quality than the water from which it was formed, and in no instance was the ice unfit for use, although taken from water abnormally high in organic content.

Ice from Black Brook, Maxwell's Ice Field, Manchester.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
323	1901. Dec. 12	None	None	Decided veg.	1.0	4.50	2.40	.0050	.0600	.0000	.0000	.07	.70	.....	..
325	Dec. 12	None	None	None	0.0	1.40	1.40	.0000	.0082	.0000	.0000	.01	.00	.....	..

Ice from Black Brook, Stearns Brothers' Ice Field, Manchester.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
324	1901. Dec. 12	None	None	Decided veg.	0.9	5.80	2.50	.0050	.0580	.0000	.0000	.11	.60	.....	..
326	Dec. 12	None	None	None	0.0	2.30	1.20	.0010	.0046	.0000	.0000	.01	.00	.....	..

Ice from Massabesic Lake, Manchester Coal & Ice Co.'s Field, Auburn.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
365	1902. Jan. 20	None	None	None	0.0	2.50	.60	.0042	.0056	.0000	.0000	.02	.00	.....	..
369	Jan. 21	None	None	Decided veg.	0.8	5.70	1.20	.0054	.0204	.0000	.0000	.12	.....	.....	..

Ice from Nutt's Pond, L. B. Bodwell & Co.'s Ice Field, Manchester.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
	1902.														
366	Jan. 20	None	None	None	0.0	3.00	.00	.0080	.0130	.0000	.0000	.03	.00	.....	..
373	Jan. 21	None	None	Decided veg.	0.7	7.20	2.20	.0052	.0230	.0200	.0002	.45	1.40	.....	..

Ice from Meadow Flowed for Ice, Sinclair & Fellows' Ice Field, Manchester.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
	1902.														
367	Jan. 20	None	None	None	0.0	3.80	.80	.0064	.0136	.0000	.0003	.05	.00	.....	..
374	Jan. 21	None	None	Decided veg.	0.5	6.50	1.70	.0024	.0100	.0000	.0000	.19	1.10	.....	..

*Ice from Meadow Flowed for Ice, West Manchester Coal & Ice Co.'s Field,
Goffstown.*

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
	1902.														
368	Jan. 20	None	None	None	0.0	3.10	.20	.0044	.0084	.0000	.0001	.02	.00	.....	..
375	Jan. 21	None	None	Decided veg.	0.2	4.50	1.70	.0010	.0098	.0000	.0000	.17	1.40	.....	..

WATER SUPPLIES OF CITIES AND TOWNS. 127

Ice from Horseshoe Pond, Field of Concord Coal & Ice Co., Concord.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
405	1902. Feb. 14	None	Coal and sand	None	0.0	1.80	.40	.0034	.0024	.0000	.0001	.04	.00	.....	..

Ice from Fort Eddy, Merrimack River, Concord, N. H.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
406	1902. Feb. 14	None	None	None	0.0	2.40	.40	.0040	.0046	.0000	.0001	.03	.00	.....	..

Ice from Long Pond, Field of Robert Crowley, Concord, N. H.

Number.	Date of collection.	APPEARANCE.				RESIDUE ON EVAPO'N		AMMONIA		NITROGEN AS		Chlorine.	Hardness.	Lead.	Quality.
		Turbidity.	Sediment.	Odor.	Color.	Total.	Fixed.	Free.	Albuminoid.	Nitrates.	Nitrites.				
407	1902. Feb. 15	None	None	None	0.0	1.50	0.40	.0006	.0010	.0000	.0000	.02	.00	.....	..

SPECIAL INQUIRIES CONCERNING WATER SUPPLIES.

Special inquiries are constantly received at the office of the State Board of Health and at the Laboratory of Hygiene from individuals relative to their water supplies. These questions cover a great variety of conditions, and ask for advice as to how certain difficulties may be solved. One of the most common, perhaps, is from individuals who have sent specimens of well water to the laboratory for analysis, the result of which showed the water to be extensively contaminated by sewage from the adjacent privy, sink drain, barnyard, etc., and it is asked, "What can be done to make the water all right? Will cleaning the well solve the problem?"

Another question that is often presented, especially by owners of springs, is, "What kind of pipe shall be used, either in reaching a new supply or as a substitute for lead pipe already in use?"

Questions of varying character are frequently being presented to the board, and in all cases information and advice are given. The following correspondence is offered as an example, as well as for general instruction:

NORTHWOOD, N. H., December 21, 1901.

Irving A. Watson, M. D., Director Laboratory of Hygiene:

DEAR SIR,—The result of the analysis of my well water is something of a surprise to me, as I supposed the supply was quite pure.

A change of supply means much expense to me, and a great inconvenience, besides much hard work.

I desire to ask you what the expense will be to me to have one of your honorable board come to this place and make an examination of the well and its surroundings, and if possible locate the cause of pollution.

Awaiting your reply, I am,

Yours very respectfully,

D. N. TILTON.

LABORATORY OF HYGIENE,

CONCORD, N. H., December 24, 1901.

D. N. Tilton, Northwood, N. H.:

DEAR SIR,—The analysis of your water showed no present pollution, but an abnormal condition, which is doubtless due to seepage from privy, sink drain, or barnyard.

This seepage may have been going on for years until the earth around the well has become saturated. There is no way of improving the quality of the water. The conditions are such that a personal examination would be of no value, since even if the cause of pollution were found and removed the quality of the water might not improve for years.

Do not infer from my report that I consider the water injurious. It might be used for a long time without causing any trouble whatever, but the fact remains that there are always present conditions that render the water suspicious.

We shall be pleased to render any further aid which may be of use to you.

Very respectfully,

H. E. BARNARD,

Chemist.

SALMON FALLS, N. H., December 24, 1901.

State Board of Health, Concord, N. H.:

GENTLEMEN,—In reply to yours of recent date, stating that the water from my well was polluted and not fit to drink, I beg to ask you what we shall do to improve it.

Would a thorough cleaning out of the well and the addition of an air tube be liable to change the quality of the water?

What causes the water to be polluted?

Very respectfully,

JOSEPH HILL.

LABORATORY OF HYGIENE,

CONCORD, N. H., December 25, 1901.

Mr. Joseph Hill, Salmon Falls:

DEAR SIR,—The analysis of the water from your well showed it to be grossly polluted by sewage, as shown by the very high chlorine, nitrate, nitrite, and albuminoid ammonia content. This pollution may be due to contamination by sink drain, privy, or cesspool; it is impossible to tell which. The ground around the well is saturated by sewage which is constantly leaching into the ground water which supplies the well. Even if the conditions which are responsible for the pollution were found and removed, the quality of the water would improve very slowly, if at all.

I can advise no remedy which will improve the water, unless an examination shows you that there is some direct connection between the well and the above-mentioned sources of pollution. If this is found to be the case, a thorough cleaning of the well and a removal of the cause may effect a radical change in the quality of the water.

I am of the opinion, however, that your best course is to close up the well and look to unpolluted sources for your water.

We shall be very glad to be of further service to you in your search for pure water.

Very respectfully,

H. E. BARNARD,

Chemist.

LITERARY INSTITUTION, NEW HAMPTON, N. H., March 14, 1902.

Mr. H. E. Barnard, Chemist, Concord, N. H.:

MY DEAR SIR,—Your careful statement of water analysis is at hand. I am very thankful to you for your evidently painstaking quantitative work. I regret, however, to find that our water, which is otherwise so potable, has been found to contain lead in a considerable quantity. It would be a matter of quite large expense to replace the lead pipe with some safer one, and I would be glad to receive a further word from you before considering a plan for so doing. First, the water has been used by an earlier holder of the place for many years without injury. This is, of course, of no consequence in the present case.

Now, further, the supply of water is sufficient to furnish a much more rapid flow, all the year, than we have permitted. Would not a more rapid flow for the shorter distance largely reduce the apparent danger? Is not the amount of lead almost a minimum for water so carried? What pipe would you advise? Iron pipe rusts away here, and cannot be used.

I am sorry to trouble you further, but am much disappointed and am in hopes a change of pipe may not be absolutely necessary.

I am, sir,

Yours very respectfully,

HENRY W. BROWN.

LABORATORY OF HYGIENE,

CONCORD, N. H., March 21, 1902.

Prof. H. W. Brown, New Hampton:

DEAR SIR,—Yours of the 14th inst. has remained unanswered because of a press of work. I trust this late reply will be satisfactory.

While the amount of lead present in your water appears to be very small, the fact that the system generally refuses to throw it off makes even these slight quantities harmful and under the proper conditions might cause lead poisoning.

Unless the water dissolves lead very rapidly, there should be but traces present in constantly running water, and if, as you say, a much more rapid flow can be obtained, your supply will probably be quite free under the new conditions.

If you are contemplating putting in new pipe, I advise the use of cement-lined iron pipe if it can be obtained. There is a tarred iron pipe which also gives excellent satisfaction after the taste and odor of the tar have disappeared. The one other pipe to be considered is the ordinary galvanized iron pipe, which is so generally used. There is no danger from zinc poisoning in its use, but in some soils it lasts but a few years.

It remains for the pipe manufacturers to bring out a pipe which is safe and durable, but at present the only approach to that end is the above-mentioned cement-lined pipe.

Very respectfully,

H. E. BARNARD,

Chemist.

SOMERSWORTH WATER-WORKS, COMMISSIONERS' OFFICE,

SOMERSWORTH, N. H., April 30, 1902.

Mr. H. E. Barnard, Chemist, Concord, N. H.:

DEAR SIR,—I take pleasure in writing you for information in regard to securing analyses of our city water. We are paying five dollars each time we have the water analyzed, and as it is examined each month the cost in a year is considerable.

I write to you to inquire what it will cost to have the water analyzed at your laboratory at least once a month.

Yours respectfully,

P. D. O'CONNELL,

Superintendent Water-Works, Somersworth, N. H.

LABORATORY OF HYGIENE,

CONCORD, N. H., May 2, 1902.

P. D. O'Connell, Superintendent Water-Works, Somersworth, N. H.:

DEAR SIR,—In answer to your letter of the 30th inst., it gives me great pleasure to assure you of our willingness to examine your city water once each month without expense to you, except the express charges on the samples.

The laboratory was established for the use of the people of the state, and we desire to make examinations of all the water supplies as rapidly and frequently as we can.

We furnish our own collecting bottles, which are sent upon request, together with full directions for sampling and shipping.

Unless you think otherwise, it seems advisable to make the examination of your supply about the first of each month and, therefore, without word from you, I shall hereafter ship you a bottle for collecting the sample at that time.

Please give me very full instructions and information concerning this first sample, for which I am shipping you a bottle today, that I may understand how complete an examination you desire and, as well, the location and surroundings of your supply.

I prefer not to have samples shipped so late in the week that they will reach me on Saturday, as that makes it necessary for the analysis to be made on Sunday, at considerable inconvenience to me.

Again assuring you of our desire to serve you and to aid you in securing for the people of Somersworth a pure and wholesome water supply, I am,

Very respectfully yours,

H. E. BARNARD,

Chemist.

In a communication received from James Ayer, secretary of the board of Health of Salem Depot, he outlines the plan of supplying the town with water from Canobie lake, and makes inquiry concerning the kind of supply pipe most suitable for use with water like sample No. 228.

The reply from the Laboratory is as follows:

LABORATORY OF HYGIENE,

CONCORD, N. H., July 28, 1902.

James Ayer, Secretary Board of Health, Salem Depot, N. H.:

DEAR SIR,—In reply to your communication of July 28, 1902, concerning the kind of pipe most suitable for use with water like sample No. 228, I will advise you as follows:

It is never safe to employ lead pipe as a carrier for water when the water is soft or contains organic matter, or when the solid or mineral matters are low. The water from Canobie lake is very soft; the solid contents are exceptionally low; and the organic matter present is high.

It would undoubtedly be unwise to use lead pipe in conveying this water. The use of galvanized iron pipe* with water of this character is not to be

*What might appear to the uninformed to be a discrepancy between the statement made in Mr. Barnard's letter to Prof. Brown on the subject of galvanized iron pipe, and that expressed in this letter is readily explained from this point of view. In all new galvanized iron pipe for a short time after it is put in, the water has a foamy, frothy appearance, and is charged with fine particles of zinc from the inside surface of the pipe. This, in a short system with single pipe, like that contemplated by Prof. Brown, is rapidly removed, and the danger, if there is any, eliminated. In this case a proposed public water supply is under consideration, and with its long mains and extensive ramifications of smaller pipe there might possibly be some danger of zinc poisoning, in especially susceptible persons, from the relatively large quantity that would be delivered from the pipes, which condition would not be found in a short line that can be readily washed out.

I. A. W.

advised, as there is some danger of zinc poisoning from the traces of zinc dissolved by the water. Plain iron pipe is perfectly safe. The only objection to its use is its liability to rust.

In the city of Concord, where the quality of the water is very similar to that of Canobie lake, a cement-lined pipe is employed in making connections with the mains. This is, in my opinion, the most durable and most desirable pipe made that is not too expensive for general use. The cement-lined pipe is not offered for sale, as it cannot be shipped because of its liability to breakage in transit.

Machines for lining ordinary iron pipe with cement are for sale, however, and the pipe is easily and cheaply prepared at the place where it is to be laid. Tarred iron pipe can be procured which will prove durable and inexpensive. The taste and odor of the water conveyed through tarred pipe are not pleasant when the pipe is first laid, and might prejudice some against using the water.

If lead or galvanized iron pipes are used, the quality of the water will be affected; if other kinds of pipe are laid the water will not be affected and the pipe but slightly, if at all.

Trusting that I have answered your questions satisfactorily, and assuring you of our appreciation of the way you are looking after the water supplies of your town, I am,

Yours very respectfully,

H. E. BARNARD,

Chemist.

SOME DATA CONCERNING THE PROPOSED CHLORINE MAP
OF NEW HAMPSHIRE.

In the course of a water analysis there are two points to be considered which are essential in revealing the true character of the water,—the quantity of nitrogen present in its various forms, and the amount of chlorine. The nitrogen may exist as free and as albuminoid ammonia, which is subject to oxidation to nitrites and nitrates, thus changing it from organic life to inorganic matter, as salts of soda, lime, and potash. But the chlorine content is constant. The stability of its salts fixes its presence, and once a constituent of a water supply it never disappears.

The chlorine present in water is almost always due to the presence of common salt, chloride of sodium, of which 60 per cent is chlorine, and the sources of chlorine are usually the sink drain, with its burden of salted water from domestic operations, the house drain with its chlorine containing excreta, and the stable drain with a slight chlorine content in comparison with the other two. Chlorine may also be derived from the commercial fertilizers so commonly used in farming operations. But chlorine is of itself not harmful. Its use to the chemist is due to the fact that its presence reveals a past or present history of pollution by some form of sewage, and where sewage is the typhoid germ may be.

*There are no data in this country sufficiently complete from which we can determine the amount of chlorine contributed to sewage by each inhabitant per day. Calculations based on observations in England indicate that the amount is approximately .045 pound per day per person; and, broadly speaking, we may say that four families, or twenty persons per square mile, will add, on an average, .01 of a part per 100,000 of chlorine to the water flowing from this area, and that a very much smaller population will have the same effect during seasons of low flow.

It is well known that the best waters contain traces of chlorine due to the fact that the winds blowing from off the ocean bear inland salt-laden moisture, which is precipitated as rain. The amount present in a given locality is fairly constant, but is somewhat influenced by the direction and force of the winds, and the amount and distribution of the rainfall. However, a series of analyses of waters of known purity will establish a chlorine content which is, for all ordinary purposes, a constant. This is called the normal chlorine. Whenever sewage finds access to water the amount of chlorine present exceeds the normal according to the percentage of sewage in the supply.

It is therefore of great importance to the water analyst that the normal chlorine for each water examined is known. With this knowledge at

* Report of State Board of Health of Massachusetts for 1890, page 680.

hand it is possible to determine whether chlorine present in a supply is due to the influence of the sea or to sewage. For example, a water at Hampton may contain, under perfectly normal conditions, .6 parts of chlorine per 100,000, while an equally pure supply at Hanover contains but .07 parts per 100,000. The chlorine content of the Hanover water may be increased nine times before it reaches the percentage of the Hampton supply,—that is, a large amount of sewage may be introduced before its presence is manifested in the chlorine content unless the normal chlorine content for Hanover is known.

We are making extensive investigations in order to determine the normal chlorine for each town in the state. Through the boards of health we are collecting samples of surface waters and springs of known purity whose drainage areas are uninhabited and in no way liable to pollution. We collect three samples from each town, so that the results obtained may not be influenced by any unknown local conditions, and the analyses will be repeated at suitable intervals until absolute values are determined. It is also possible to make use of many of the regular water analyses where there is no evidence of pollution.

During the past year we have determined the chlorine content of upward of 250 uncontaminated supplies, and from the results obtained have deduced the approximate normal chlorine content of the waters of sixty-seven towns. These figures are subject to revision as the various supplies are re-examined, but the variation from the first results is slight in most instances.

Near the coast normal chlorine content changes very rapidly. In the town of North Hampton, water half a mile from the coast contains upward of 2 parts of chlorine per 100,000. One and a half miles from the coast the chlorine content has dropped to 1 part per 100,000, while five miles from salt water the figure is .8 parts.

The normal chlorine of Stratham is .64 parts per 100,000, and that for the adjoining town of Newmarket is but .35 of a part, a drop of .3 parts in a few miles. The variations throughout Cheshire, Sullivan, and Grafton counties do not amount to more than .05. Waters north of the White Mountains do not show any evidence of being influenced by the storms which occasionally sweep inland from the Atlantic, and their chlorine content is as low as can safely be determined.

It is interesting to note that the great bay which flows inland from Portsmouth for twenty or more miles does not greatly change the chlorine content of adjacent waters, although deep well waters near Great bay and Exeter river frequently show increased chlorine. This is due to the mingling of the brackish waters of the river with the natural ground water supply. In the examination of supplies from Exeter excessively high

chlorine contents have been observed, which could not have been due to any other cause.

The work of making an accurate chlorine map involves prolonged study of the natural water supplies of the state, but it is a matter of such great importance that it will be hastened as rapidly as possible. We are greatly indebted for the willing co-operation of the various boards of health who have aided us in collecting samples and in furnishing the necessary data, and we trust that every person who assists us will do so conscientiously and willingly, fully understanding the part he is taking in making the chlorine map of New Hampshire.

EXAMINATION OF MILK.

EXAMINATION OF MILK.

Owing to the great amount of water work constantly on hand, we have not attempted to make any systematic inspection of milk, and have confined our work in that direction to making corroborative analyses when called upon to do so by the milk inspectors of towns and cities. With few exceptions the milk supplies of the state do not receive the care and attention they require. But few of the cities and towns have appointed milk inspectors, as they are authorized to do, and consequently there is no way of regulating the quality of the milk sold. This neglect allows the unscrupulous dealer to practice systematic fraud upon his customers. Watered or skimmed milk, weakened and robbed of its fat and valuable qualities, is sold to furnish food to sick and nursing children; preservatives are largely used to keep milk spoiled by dirty and careless handling; coloring matters are employed to give the rich appearance of cream to the milk. With agents or milk inspectors in the cities and towns working in co-operation with the Laboratory of Hygiene, it would be possible to raise materially the standard of milk sold.

The city of Manchester, after years of lax inspection, has given the board of health control of the inspection of milk, and the results achieved under the new management have been remarkable. The small dealers, retailers of two or three cans of milk a day, with no proper facilities for handling milk, have been driven out of the business, and a complete registration of milkmen is kept and their stables inspected. A full account of their methods and the results reached is included in this report.

The State Laboratory of Hygiene has assisted their inspector in several court cases. All suspicious samples of milk, either poor in quality or treated with some preservative, are sent, under seal, to the laboratory, where a careful examination of the milk is made. If the results confirm those reached by the milk inspector action is at once brought against the dealer who sold the milk.

Following is the summary of results obtained during the past year:

Analyses of Milk.

No. of sample.	COLLECTED BY	Date.	Total solids.	Solids not fat.	Fat.	Preservative.	Disposal of case.
1A	Board of Health, Manchester.	1901. Aug. 23	13.20	8.86	4.34	Formaldehyde.	Sentence imposed by Superior Court.
2A	Board of Health, Manchester.	Aug. 29	.....	.....	.....	No formaldehyde.	.....
No. 51	Board of Health, Manchester.	Aug. 29	.....	.....	.....	No formaldehyde.	.....
3A	Board of Health, Manchester.	Aug. 29	.....	.....	.....	No formaldehyde.	.....
No. 52	Geo. A. Berry, Insp., Concord.	Sept. 7	.....	.....	2.50	.....	.....
4A	Board of Health, Manchester.	Sept. 9	.....	.....	.....	No preservative.	.....
No. 105	A. K. Day, M. D., Concord.	Sept. 11	12.95	9.55	3.40	.....	.....
6A	Board of Health, Manchester.	Sept. 11	9.60	7.175	2.425	No color used.	.....
7A	Board of Health, Manchester.	Sept. 20	10.68	8.78	1.90	.....	.....
No. 110	Board of Health, Manchester.	Sept. 25	11.08	8.43	2.65	No preservative.	.....
8A	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	.....
No. 128	Board of Health, Manchester.	Sept. 25	.....	.....	.....	No formaldehyde.	.....
9A	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	Sentence imposed by Superior Court.
No. 157	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	.....
10A	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	Sentence imposed by Superior Court.
No. 158	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	.....
11A	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	Sentence imposed by Superior Court.
No. 159	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	.....
12A	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	Sentence imposed by Superior Court.
No. 162	Board of Health, Manchester.	Sept. 25	.....	.....	.....	Formaldehyde.	.....
13A	Board of Health, Manchester.	Sept. 26	.....	.....	.....	Formaldehyde.	Sentence imposed by Superior Court.
No. 164	Board of Health, Manchester.	Sept. 26	.....	.....	.....	Formaldehyde.	.....
14A	Board of Health, Manchester.	Sept. 26	.....	.....	.....	Formaldehyde.	Sentence imposed by Superior Court.
No. 165	Geo. A. Berry, Insp., Concord.	Dec. 11	13.28	.....	.....	.....	.....
15A	Geo. A. Berry, Insp., Concord.	Dec. 11	11.22	.....	.....	.....	.....
No. 18	Geo. A. Berry, Insp., Concord.	Dec. 12	11.37	.....	.....	.....	.....
16A	Geo. A. Berry, Insp., Concord.	Dec. 12	12.21	.....	.....	.....	.....
No. 19	Geo. A. Berry, Insp., Concord.	Dec. 12	11.40	.....	.....	.....	.....
17A	Geo. A. Berry, Insp., Concord.	Dec. 13	11.40	.....	.....	.....	.....
No. 26	Board of Health, Manchester.	1902. Feb. 20	9.34	6.59	2.75	No preservative.	.....
18A	Board of Health, Manchester.	Feb. 20	11.00	7.70	3.30	No preservative.	.....
No. 27	Board of Health, Manchester.	Feb. 20	11.00	7.70	3.30	No preservative.	.....
No. 30	C. H. Noyes, Nashua.	Mar. 24	17.41	.....	.....	.....	.....
20A	Board of Health, Manchester.	Mar. 29	.....	.....	.....	Formaldehyde.	Sentence imposed by Superior Court.
No. 718	Board of Health, Manchester.	Mar. 29	.....	.....	.....	Formaldehyde.	.....
21A	F. W. Barnes, Milford.	Apr. 1	12.89	8.99	3.90	.....	.....
No. 719	Board of Health, Manchester.	May 3	.....	.....	.....	No preservative.	.....
22A	Board of Health, Manchester.	May 19	.....	.....	.....	No formaldehyde.	.....
23A	Board of Health, Manchester.	June 26	.....	.....	.....	Formaldehyde.	Indicted by grand jury. Case still pending.
No. 786	.....	.....	.....	.....	.....	.....	.....
25A	.....	.....	.....	.....	.....	.....	.....
26A	.....	.....	.....	.....	.....	.....	.....
No. 920	.....	.....	.....	.....	.....	.....	.....
27A	.....	.....	.....	.....	.....	.....	.....
No. 1019	.....	.....	.....	.....	.....	.....	.....
28A	.....	.....	.....	.....	.....	.....	.....
No. 1174	.....	.....	.....	.....	.....	.....	.....
28	.....	.....	12.045	8.26	3.02	.....	.....

Formaldehyde was found to be present in seven cases.

Mr. H. E. Barnard, State Chemist, Concord, N. H.:

At your suggestion I submit the following report upon the inspection of milk in the city of Manchester, for the year beginning September 1, 1901.

The inspection of milk had been under the direction of the board of health for about two months at this time and was in good running order. A labor-

atory had been fitted up in the office and apparatus for making milk tests and analyses had been procured. The record books of the previous milk inspectors had been turned over to us, and all dealers in milk, skim-milk, and cream (including stores) who were not already licensed were compelled to obtain one.

A great many were found who had not paid the license fee for several years, and when called upon by the inspectors to produce their license displayed one long since expired. Many people who keep but one cow and have only a few customers complain because they are obliged to pay as large a fee as those who sell hundreds of quarts a day. Several persons were made to pay who had bought out some licensed dealer, and who had taken it for granted that they had purchased the license also. The board was obliged to use strenuous language in the newspapers and in other ways to make some of the dealers comply with the law.

Two hundred nineteen licenses have been granted by this board since June 1, 1903, and we feel sure that no milk is sold in the city at the present time by any but licensed dealers. This part of the work is done by the office clerk, and many dealers have expressed their gratification at being able to come to an office where, during certain hours, they are sure to find some one with whom they can transact their business.

From the beginning we have made it a rule that no figures found in the analysis of milk should be given out. If a sample of milk is found to be below the legal standard the dealer is notified of the fact, but if it proves to be all right he understands that no report is necessary. We have made it a practice to test all samples of milk which are left at the office, either by citizens, milk dealers, or milk raisers. This has been a great help to the milk dealers in keeping up the quality of their milk, and the result has been that some of the raisers have disposed of their poor cows.

When a dealer or raiser leaves milk to be tested we make out the report and designate the quality of the milk by such terms as, excellent milk, good milk, fair, and below standard in butter fats, or below standard in solids. We believe this has saved us a great deal of fault-finding, and is just as good for the milk trade as figures, which are not generally understood.

One thousand four hundred fifty-three samples of milk, skim-milk, and cream were collected and tested during the year beginning September 1, 1901. Fifty-three samples were found below the standard in butter fats and total solids.

One hundred eight samples of milk, taken in September, 1901, averaged 4.04 per cent of butter fat, and 12.29 per cent total solids. Six samples were below the legal standard in butter fat and total solids.

Six hundred thirty-six samples of milk collected in October, November, and December, 1901, and January, February, and March, 1902, averaged 4.11 per cent of butter fat and 12.83 per cent total solids. Thirty-four samples were below the legal standard in butter fat and total solids.

Six hundred fifty-six samples of milk taken in April, May, June, July, and August, 1902, tested an average of 3.87 per cent of butter fat, and 12.34 per cent total solids. Thirteen samples were below the legal standard in butter fat and total solids.

Twenty-three samples of cream were collected and analyzed, the average per cent of butter fat being 29.25. Several samples were tested for the vol-

atile acid fats by the Reichert-Wollny method and a high number was obtained. The specific gravity of the butter fat was also ascertained. Nineteen samples of skim-milk tested an average of .48 per cent butter fat and a specific gravity of 1.0334. Some of the skim-milk samples I tested for the specific gravity of the milk serum.

Several samples of milk were tested for butter fat by the Adams method, and the results corresponded very closely with the Babcock method. The total solids given were estimated by means of the specific gravity of the milk and the amount of butter fat. Seventeen samples were dried out to get the total solids, and they generally corresponded very closely with the estimated results. Nearly all of the samples of milk which were found to be below the standard for butter fat and solids, I tested for the specific gravity of the milk serum, and in several instances found milk which was undoubtedly watered. These I followed up by having the dealers obtain samples from each cow, and proved this to be the case. Such dealers were warned that they were responsible for this milk even if they did not raise it.

About the middle of May, 1902, I began to make tests for the acidity in the milk, using the Mann volumetric method of analysis. This was done for several reasons, chiefly to give us some idea of the condition of the milk which was being delivered to the public, and also to detect preservatives in the milk, as a high percentage of acidity, without any sour taste or smell, would indicate that some boric acid or similar preservative was used, and a low percentage of acidity would give us reason to believe that sodium was present.

Four hundred forty-three samples of milk were tested for acidity, with an average of .168 per cent. This we consider to be an excellent showing, and it speaks well for the raisers and dealers in milk in this vicinity, showing that great care is exercised in cleaning the cans and utensils used in putting up the milk.

The first prosecution for violation of the law occurred in August, 1901, a sample of milk numbered 16 being purchased by Inspector J. F. Looney on August 11. This sample was tested by W. K. Robbins, of the local board, and by the state chemist, Mr. H. E. Barnard, and was found to contain formaldehyde, used as a preservative.

This case was placed in the hands of Chief of Police M. J. Healy, and the dealer was summoned before the police court, waived examination, and was bound over to the September term of the superior court. The grand jury returned an indictment and sentence was imposed.

Four other dealers have been prosecuted during the year, with similar results, and one case is still pending.

The progress made during this first year of milk inspection has been very satisfactory, and the success has been due in a great measure to the assistance of Mr. W. K. Robbins of this board, a chemist by profession, who has given valuable instruction in the laboratory work.

Respectfully submitted.

C. O. SEAMAN,

Milk Inspector.

OFFICE OF INSPECTOR OF MILK, CITY HALL,

NASHUA, N. H., March 24, 1902.

Mr. H. E. Barnard:

DEAR SIR,—In the accompanying box is a sample of milk taken from a herd of cows Saturday morning, then cooled and sold in the city the same day. As you will see, it is ropy and decidedly abnormal. This dealer has had similar trouble with his milk for about a week, perhaps fifty of his customers complaining about it today.

Another dealer living ten miles from the first has also had trouble. Very likely there are others that I have not found out.

Now have you at hand the means of finding out the cause of the trouble? And can you suggest remedies? I take it that the change is produced by organisms which cause a fermentation. Am I correct in this?

The dealer who has had the most trouble is a clean, careful young man. Any suggestion on this matter will be gratefully received.

Yours truly,

CHARLES H. NOYES.

LABORATORY OF HYGIENE,

CONCORD, N. H., March 25, 1902.

Prof. C. H. Noyes, Nashua, N. H.:

DEAR SIR,—Your sample of milk with inclosed note received.

Stringy milk may be produced by the rapid growth of a certain bacillus, especially in hot, moist weather, or may be due to the systematic condition of the cow. I believe veterinarians claim it is due to a specific disease, and in your cases the cows should be treated or inspected by some competent person, who will recognize the trouble and will be able to cope with it.

An examination of the milk gives a total solid content of 17.41 per cent, which is far above the normal, and an examination under the microscope shows several classes of bacteria to be present in great numbers. The trouble in this case is not due to uncleanness, but to the condition of the cows, and while the milk continues thick and stringy it should not be used.

Ordinarily the duration of the disease is short, but in some cases the cows do not recover. I can only advise inspection of the herds by a veterinarian, as the best and safest course to pursue.

Very respectfully,

H. E. BARNARD,

Chemist.

NOTES ON THE DETECTION OF FORMALDEHYDE IN MILK.

Of all the foods and drinks of man there is perhaps none which is more important than perfectly pure, clean, and healthful milk, and to secure it should be the subject of earnest care.

It is well known that milk undergoes a number of chemical changes in its constitution some hours after milking. It becomes sour, owing to the decomposition of the milk sugar, the casein separates, and finally putrefactive decomposition begins. These changes are evidenced by the presence in milk of bacteria, which, for the most part, do not generate diseases, but which may be and often are accompanied by harmful bacteria that obtain access to the milk from the body of the animal, from the air, from the water used in washing the cans, from the hands, clothing, and person of the milker, and the like. Even when collected with precaution, the careless distribution of milk from cart or store may result in its contamination with disease-producing bacteria.

The importance of a method, or methods, of protecting milk from these minute forms of life, which may cause so much damage, or of rendering them harmless, is evident. Several methods have been adopted to secure this end. The most important are pasteurization and sterilization. The simple pasteurization of milk is useful, provided the milk is immediately cooled, and used within twenty-four hours. But careful sterilization is the most effective method of preserving milk. Thorough cleanliness in the stable and dairy, the use of sterilized instruments for the collection of the milk, and careful and scientific handling of the product at every step between the cow and the consumer will be most effective in preventing the entrance of bacteria and consequent souring of the milk.

A third method of preserving milk is by the use of chemicals which either neutralize the acidity of the milk or retard the growth of bacteria. However, preservation by chemical means is neither satisfactory nor advisable. The agents employed are injurious to health even in small quantities, if taken continuously.

The temptation to the unscrupulous dairyman or milk vender to cover his lack of cleanliness and proper subsequent care by the use of chemical preservatives is great. Many preparations have been advocated for this purpose, including bicarbonate of soda, and boric and salicylic acid. Within the last decade an aldehyde, known as formic aldehyde, methanal, methyl aldehyde, formaldehyde, etc., of the formula (H C H O), of valuable germicidal and antiseptic powers, has been brought into prominence and largely employed in the preservation of milk and other foods.

For ordinary uses formaldehyde appears on the market as an aqueous solution from 33 to 40 per cent strength, under the trade name of

Formalin. As a milk preservative it is also sold under various misleading names, as Freesine, Preservaline, Formol, Freezaline, Anti-Sour, etc. These preparations are sold in weak solutions, in some instances not containing more than $2\frac{1}{2}$ per cent formaldehyde, and are accompanied by the most engaging claims for usefulness.

There are unquestionably many milk dealers who are honest and who serve honest milk and who are so cleanly in their methods of handling their product that they do not have to rely upon the aid of formaldehyde or other preservatives. On the other hand, it is sadly true that in many communities there are dealers who, through ignorance or unscrupulousness, do add foreign and deleterious substances to their milk. It is well that such conditions are met by legislation, and that the selling of milk containing preservatives is a violation of the laws of the state. But since the adulteration exists and the only remedy is prosecution, there must be methods for the detection of the adulterants. Fortunately the detection of formaldehyde in milk is comparatively easy for one who has had some laboratory experience.

Quite a number of methods for the detection of formaldehyde in milk are in use, and while it is not our object to review all of them, it may be helpful if we give briefly some of the simple tests:

1. HEHNER'S TEST.

This method depends upon the fact that when milk containing formaldehyde is mixed with sulphuric acid containing a trace of ferric salt a blue color appears.

Place 5 cc. milk in a test tube and dilute with an equal volume of water. Carefully pour down the sides of the test tube strong sulphuric acid containing a trace of ferric chlorid, so as to form a layer of acid below the milk. If formaldehyde is present a violet ring is formed at the junction of the two liquids. One part in 100,000 may be detected.

Caution. The acid used should be of 1.81-1.83 specific gravity, and must contain a trace of ferric salt.

The charring due to the action of the acid on the milk must not be mistaken for the color reaction.

2. HYDROCHLORIC ACID TEST.

Hydrochloric acid containing a small amount of ferric chlorid gives a characteristic violet with quantities of formaldehyde not over one part to 1,000.

The test is applied by heating 1 cc. of the sample in a test tube with 4 cc. of strong hydrochloric acid containing a trace of ferric chlorid. A purple color appears, varying from a delicate tint to a deep violet, if formaldehyde is present.

Caution. If a yellow color appears, repeat the test, using milk that has been diluted, 1 to 10, with water.

3. LEBBIN'S TEST.

Boil a few cc. of the sample with .05 grams resorcinol, to which half, or an equal volume, of a 50 per cent solution of sodium hydroxide is added. If formaldehyde is present, the yellow solution changes to a fine red color. This color becomes more apparent on standing.

4. THE DENIGE TEST.

This test depends on the reaction of Schiff's reagent with formaldehyde. The following solution must be prepared:

40 cc. of $\frac{1}{2}$ per cent solution of fuchsine.

250 cc. distilled water.

10 cc. of sodium bi-sulfite of 1.375 specific gravity.

10 cc. pure sulphuric acid.

Add 1 cc. of the above solution to 10 cc. of the suspected milk and let it stand for five minutes. Then add 2 cc. of pure hydrochloric acid and shake. A violet color will appear in the presence of formaldehyde; a yellowish white color in its absence.

5. JORISSEN'S TEST.

Several drops of a 10 per cent aqueous solution of phloroglucinol are added to 10 cc. of the suspected milk in a test tube, well shaken, and a few drops of caustic potash (or caustic soda) added. If formaldehyde is present a delicate red color appears.

This test is very easily applied and gives excellent results. One part of formaldehyde in 100,000 can be detected.

In some cases formaldehyde may be detected by its characteristic odor when the milk is warmed. Hehner has observed that formaldehyde disappears from milk on standing. He found that one part in 100,000 could not be detected after one week; one part in 50,000 after two weeks; and one part in 25,000 after three weeks.

There may be errors in special cases by any one given method, and it is advisable, when a positive reaction is obtained, to confirm it by employing at least one other method, and preferably more.

STATE LABORATORY OF HYGIENE.

STATE LABORATORY OF HYGIENE.

In 1899 a bill was before the legislature for the establishment of a laboratory of hygiene, to be under the management of the State Board of Health. This measure was favorably reported upon by the committee on public health, and subsequently referred to the committee on appropriations. After a hearing on the subject the committee reported that, while they believed that a laboratory of hygiene would be of public benefit, owing to the amount of money already appropriated for other purposes they deemed it best to refer the matter to the next legislature, which was done.

In 1901 the matter was again taken up, favorably recommended by the committees on public health and appropriations, and became a law without any opposition to speak of.

The bill was as follows:

AN ACT TO ESTABLISH A LABORATORY OF HYGIENE.

Be it Enacted by the Senate and House of Representatives in General Court Convened:

SECTION 1. The State Board of Health is authorized to establish and equip a laboratory with the proper and necessary apparatus, utensils, and instruments for the chemical and bacteriological examination of water supplies, milk, food products, drugs, etc., and the investigation of cases and suspected cases of diphtheria, typhoid fever, tuberculosis, pneumonia, malaria, glanders, and other infectious and contagious diseases.

SECT. 2. The said board shall employ a chemist, and shall, as far as practicable, make investigations and analyses of public water supplies, and of foods and drinks offered for sale in our markets, and shall conduct investigations along these lines, with a view to discovering adulterated and fraudulent products, and shall enforce the law relative to the same, as provided for in chapter 269 of the Public Statutes.

SECT. 3. The board shall also provide for the bacteriological examination of cases and suspected cases of diphtheria, typhoid fever, tuberculosis, glanders, and such other diseases as it may deem necessary, including any diseased condition that may be found in slaughtered animals, and in cases of infectious diseases shall report its findings immediately, by telegraph or telephone, to the physician requesting the same.

SECT. 4. The State Board of Health may publish quarterly in a bulletin the results of the analytical work done in said laboratory, naming fraudulent and adulterated articles of food found on sale in this state, together

with such other information relating to sanitary matters as it may deem advisable, and the said board shall conduct its investigations along such lines as it may deem to be for the greatest public utility. It shall make special investigations into the character and quality of the water supplies of any locality in the state when requested by any board of water commissioners, board of health, or by consumers.

SECT. 5. All investigations conducted in the said laboratory shall be free to the people of this state.

SECT. 6. The sum of two thousand dollars is hereby appropriated for the purpose of procuring the proper and necessary apparatus, utensils, and instruments for the equipment of such laboratory, and the sum of five thousand dollars, or as much thereof as may be needed, is hereby appropriated for each of the years 1901 and 1902 to pay the necessary expenses of said laboratory, the purchase of supplies, and such other incidentals as may be required, which sums shall be expended under the supervision and direction of the State Board of Health, and all expenditures shall be audited by the governor and council.

SECT. 7. This act shall take effect upon its passage.

[Approved February 20, 1901.]

A few months after the passage of this bill, suitable rooms had been secured in a block in the city of Concord, and duly equipped as far as possible under the appropriation made for that specific purpose, and work was commenced in May, 1901.

The secretary of the State Board of Health was made director of the laboratory, Mr. H. E. Barnard was appointed chemist, and Drs. Howard N. Kingsford of Hanover and Arthur K. Day of Concord, bacteriologists.

It was thought best to establish two bacteriological departments in different sections of the state, for the convenience of physicians in obtaining immediate reports upon specimens sent, particularly in diphtheria cases, and therefore the board established two laboratories,—one at Hanover, in charge of Dr. Kingsford, and the other at Concord, in charge of Dr. Day. The physicians of the state were instructed that specimens for bacteriological examinations might be sent to either place, as was most convenient. It was decided that all work in chemical analysis should be done at the Concord laboratory.

CHEMICAL DEPARTMENT.

This department, as noted above, was placed in charge of Mr. H. E. Barnard, B. S., a native of New Hampshire and a chemist of repute, who resigned a government position which required the most accurate analytical work to accept the position tendered.

The laboratory was fairly well equipped with apparatus for the most needed lines of work, particularly for the analysis of water. While the greatest amount of work has been done in the examination of water sup-

plies, considerable has also been accomplished in other directions. The analysis of public and private water supplies has been carried on to an extent that has accomplished most excellent results. The work of Mr. Barnard has been shown very fully in the articles on "Examination of Water Supplies," "Water Supplies of Cities and Towns," "Lead Poisoning," etc., as will be seen by an examination of most of the preceding matter in this report. One need only to study that part of the report to be convinced of the importance of the work done in the chemical department of the laboratory during its first year of existence.

BACTERIOLOGICAL DEPARTMENT.

Work in this department is practically limited to bacteriological examinations for the investigation of suspected cases of tuberculosis, diphtheria, typhoid fever, glanders, etc., and for the determination of micro-organisms in drinking water, milk, cream, butter, etc., and for diseased conditions found in slaughtered animals. It is not intended at present to undertake the examination of pathological products outside of those mentioned. Blood counts, urinary analyses, the examination of stomach and other organs in cases of suspected criminal poisoning, cannot be undertaken at the laboratory under present conditions. Matters pertaining more directly to public health questions, as well as the fact that our equipment is not sufficient for the latter-named work, preclude examinations of this kind. In the following pages will be given briefly an account of work done in the bacteriological department.

TUBERCULOSIS—EXAMINATION OF SPUTA.

It is of vital importance for the successful treatment of tuberculosis that the disease be positively recognized and determined in its earliest stages. It has been demonstrated beyond all reasonable controversy, that a very large proportion of cases of tuberculosis might be cured were they discovered in their incipency and proper treatment given. Not infrequently is it impossible to diagnose a suspected case until the bacillus of the disease has been discovered, or excluded by repeated bacteriological examinations.

OUTFITS.—For the purpose of making the laboratory as available to the physicians of the state as possible, outfits for the collection of samples of sputum were placed in one or more drugstores in all the cities and most of the towns of the state. In some instances, where there were no drugstores, outfits were sent direct to the local physician, the object being to place these outfits so that they would be readily accessible at any time.

The outfit first sent out for the collection of sputum consisted of a small glass jar, encased in a wooden shipping tube, already labelled for shipment to the laboratory. Later, it was thought advisable to test the practical utility of the wooden (Hart's) sputum box, which was coated on the inside with asphaltum paint, so as to make it impervious, and inclosed in a pasteboard shipping box, with printed address, so that the whole combination might be of the greatest possible convenience in practical use. We have found these boxes to be unsatisfactory, for the reason that they crack so that there are numerous little fissures, allowing the sputum to pass through the bottom or top of the box. Even with subsequent recoating some difficulties of the same kind were met with. It is believed that most of the boxes distributed throughout the state, by reason of having been recoated (some of them two or three times) at the laboratory, are all right for the intended purpose. Their use, however, will be discontinued after the exhaustion of the present lot, and the little glass sputum jar first sent out again used.

Each outfit is accompanied with a blank for the purpose of obtaining as much data as possible relating to the cases. The following is a copy:

TUBERCULOSIS.

 SPECIMEN FOR EXAMINATION.

Doctor's name.....
 City or town.....
 Patient's name.....
 Age.....Sex.....

Occupation
 Number of specimen: 1st, 2d, 3d.....
 Sputum—When was specimen discharged?.....
 Duration of disease.....
 Are there any other cases in same household?.....
 If so, how many?.....
 Clinical diagnosis.....

RETURN THIS BLANK, FILLED OUT, WITH THE SPECIMEN.

All charges for transmission must be paid by the party sending the specimen; and also telegraph or telephone charges in reporting results. Report will be sent by mail, as soon as possible, unless otherwise ordered.

Send Specimen to Concord or Hanover, as may be most convenient.

Received
 Incubator
 Result
 Reported
 Mail, Telephone, Telegraph.

Upon the reverse side of the above blank is the following:

Remarks:

.....

NEW HAMPSHIRE STATE BOARD OF HEALTH.

LABORATORY OF HYGIENE.

DIRECTIONS FOR COLLECTING AND SENDING SPŪTUM.

The expectoration discharged in the morning is preferred.

Have the patient wash out the mouth and throat with pure water early in the morning, and then cough up the sputum from the lower air passages.

Care should be taken that the contents of the stomach, articles of food, etc., are not discharged during the act of expectoration and collected instead of ordinary sputum. Purulent, cheesy, and muco-purulent sputum most frequently contain the bacilli; pure mucous, blood, or saliva do not as a rule contain the bacilli.

If the expectoration is scanty, the entire amount discharged in twenty-four hours should be collected.

The sputum should not be kept, but forwarded in as fresh a condition as possible.

Sputum must be sent in jars furnished for the purpose by the State Board of Health, and must not be sent by mail.

Arrangements have been made with the express companies to make a special delivery of specimens sent to the laboratory, so that there may be no delay in obtaining results. Sputum is examined, as a rule, on the following morning after its receipt, and the physician sending same notified of results on the following blank form:

Laboratory No.....

LABORATORY OF HYGIENE,
NEW HAMPSHIRE STATE BOARD OF HEALTH.
BACTERIOLOGICAL DEPARTMENT.

.....N. H.....190.....
Dr.....

DEAR SIR:

The examination of the sputum from.....
.....received on
.....shows does not show the presence of
.....tubercle bacilli.

The result is not reported as *negative* in any case until after a thorough examination of the specimen submitted. The *positive* results are expressed as *few*, *moderate number*, or *numerous* tubercle bacilli.

Few signifies that the bacilli are not present in every field, but only one or more are to be found in the entire preparation or preparations.

Moderate number signifies that the bacilli are present in every field, but that each field contains less than five.

Numerous signifies that the bacilli are present in every field, and that each field contains more than five bacilli.

If the result of the examination is negative it is not to be assumed that the case is not one of pulmonary tuberculosis, for frequently in this disease tubercle bacilli are at times absent from the sputum, and the disease can only be *probably* excluded if repeated examination of the sputum fail to show the presence of bacilli. If the first examination in a case is negative, other specimens should be sent for examination.

The demonstration of the presence of tubercle bacilli in the sputum proves conclusively the existence of tuberculosis, but the absence of tubercle bacilli or the failure to find them microscopically does not exclude the existence of the disease.

.....M. D.,
Bacteriologist.

IRVING A. WATSON, M. D.,
Director of Laboratory.

SPECIMENS OF SPUTUM EXAMINED.

Up to the first of October, 1902, 1,158 specimens had been examined in cases of suspected tuberculosis, with results which are given in detail in the following table:

CITY OR TOWN.	Number of cases examined.	Positive.	Negative.	Doubtful.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	Age not stated.	Male.	Female.	Not stated.	Number of examinations.
Acworth.....	5	1	4				1		2	1				1		5		6
Allenstown.....	22	10	12			1	8	6	3		3			1	9	13		23
Amherst.....	1	1												1			1	1
Andover.....	4	2	2			1	2	1							1	3		4
Antrim.....	1	1	1							1								1
Ashland.....	12	3	9			2	6	1	1		2				6	6		14
Barrington.....	3	1	2				2	1								3		3
Bartlett.....	3	3					2	1							2	1		3
Bath.....	1	1	1					1							1			2
Bennington.....	1	1							1							1		1
Berlin.....	20	12	8			1	6	8	2	2				1	6	14		22
Bethlehem.....	10	6	4			1	4	3	2						4	6		13
Bradford.....	6	3	3			4	2								4	2		6
Bristol.....	20	5	15		1	4	2	3	1	6	1	2			8	12		21
Brookline.....	4	1	3						1					3	1	2	1	5
Candia.....	1	1						1							1			1
Charlestown.....	2	1	1				2								1	1		2
Claremont.....	13	3	9	1	1	2	4	5		1					5	8		14
Colebrook.....	5	2	3				1	4							1	4		5
Concord.....	189	65	124		2	13	44	41	18	12	8	1		50	91	88	10	237
Conway.....	4	2	2					2	2						1	3		4
Deerfield.....	1	1						1							1			1
Dover.....	26	7	19				10	3	7	3	2	1			10	16		30
Enfield.....	3	3						1	2						1	2		3
Epping.....	3	2	1				1			1	1					3		6
Epsom.....	2	2			1											1		2
Exeter.....	22	6	16		1	4	12	1	2		2				13	9		25
Farmington.....	8	5	3			1	2	2	3						3	5		11
Fitzwilliam.....	3	2	1				1				1				1	2	1	3
Francestown.....	2	2					1				1				1			2
Franklin.....	29	12	17		2	2	9	8			1	6			1	6	23	38
Freemont.....	2	1	1			1	1								1	1		2
Goffstown.....	8	3	5				2	1	2	2	1				5	3		8
Gorham.....	2	1	1				1	1							1	1		3
Granatham.....	1	1				1										1		1
Greenland.....	12	6	6				2	6	2	1	1				3	9		30
Hampton.....	3	1	2				2	1							3			3
Hanover.....	74	8	66		1	6	35	11	4	5	4	2		6	47	27		87
Harrisville.....	2	2					1	1								2		2
Haverhill.....	11	5	6		1	1	4	4						1	5	5	1	14
Hill.....	1	1					1								1	1		2
Hillsborough.....	7	2	5			1	1	1	1	1	1				1	4	2	7
Hinsdale.....	1	1													1			1
Hudson.....	1	1					1									1		2
Keene.....	16	4	12			3	4	7		2					8	8		18
Laconia.....	12	4	8			3	3	3			1			1	1	4	7	12
Lancaster.....	5	3	2				3	1		1					3	2		5
Lebanon.....	20	6	13	1	1	1	6	6	4					2	7	12	1	29
Lisbon.....	19	12	7			3	5	5	1	3					1	8		23
Littleton.....	13	5	8			1	4	2	2			1			4	7	4	14
Londonderry.....	1	1				1										1		1
Loudon.....	1	1			1										1			1
Lyme.....	6	3	3					2	3						1	5		6
Manchester.....	65	34	31		6	7	23	12	10	4	1			2	31	33	1	81
Marlborough.....	1	1				1										1		1
Meredith.....	2	1					1								1		1	2
Milan.....	2	2								2					2			2
Milford.....	1	1						1								1		1
Monroe.....	1	1						1										1
Nashua.....	75	31	43	1	2	12	29	17	7	1	3			4	27	44	4	86
New Boston.....	2	2			1							1				2		2
New Hampton.....	2	2												2		2		2
New London.....	1	1						1							1			1
Newport.....	14	4	10		1	3	3	4	2					1	6	8		16
Northumberland.....	2	1	1					1		1					2			3
Northwood.....	3	3			2							1			1	2		3
Nottingham.....	2	2					1	1							1	1		2
Orford.....	1	1						1							1			2
Ossipee.....	4	2	2				2							2	3	1		5
Pittsfield.....	6	2	4		1	1		3	1						2	4		6
Plainfield.....	2	1	1				1				1				2			2
Plymouth.....	4	3	1						3	1					3	1		5

Specimens of Sputum Examined.—Continued.

CITY OR TOWN.	Number of cases examined.		Positive.	Negative.	Doubtful.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	Age not stated.	Male.	Female.	Not stated.	Number of ex- aminations.
Portsmouth.....	19	8	11	.....	.....	3	3	3	7	1	1	.....	.....	.....	1	8	10	1	28
Raymond.....	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Rochester.....	28	15	13	.....	.....	3	3	3	6	3	7	.....	.....	.....	3	15	12	1	30
Rumney.....	2	.....	2	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2	1	.....	3
Rye.....	3	3	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	2	.....	.....	3
Salem.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
Salisbury.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Seabrook.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Somersworth.....	22	11	11	.....	.....	3	7	5	4	1	2	.....	.....	.....	.....	10	12	.....	30
Springfield.....	2	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	1	.....	1	2
Stewartstown.....	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Sunapee.....	5	2	3	.....	.....	1	1	2	.....	1	.....	.....	.....	.....	.....	1	4	.....	6
Sutton.....	4	2	2	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	2	1	3	.....	6
Tilton.....	10	2	8	.....	.....	1	.....	2	3	2	.....	.....	2	.....	.....	4	6	.....	11
Troy.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1
Wakefield.....	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Walpole.....	5	2	3	.....	.....	.....	.....	.....	1	1	.....	1	1	.....	1	2	3	.....	5
Warner.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	2
Warren.....	3	.....	3	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	2	1	.....	3
Washington.....	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Webster.....	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3
Whitefield.....	4	.....	4	.....	.....	.....	1	3	.....	.....	.....	.....	.....	.....	.....	3	1	.....	6
Wilton.....	3	2	1	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	1	2	.....	3
Winchester.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Wolfeborough.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	1
Total.....	957	368	586	3	26	99	283	209	111	65	52	12	1	99	432	496	29	1,158	

It will be seen by the above table that sputum was sent from ninety-seven cities and towns in the state. Examinations were made in a total of 957 cases, or different individuals, while the total number of bacteriological examinations was 1,158. Of the 957 different cases 368 showed the presence of the tubercle bacilli, 586 negative results, and 3 doubtful.

The ages of persons from whom sputum was received were as follows:

Between 1 and 10, 26; between 10 and 20, 99; between 20 and 30, 283; between 30 and 40, 209; between 40 and 50, 111; between 50 and 60, 65; between 60 and 70, 52; between 70 and 80, 12; between 80 and 90, 1; and in 99 instances the age was not given.

Sex was as follows: Males, 432; females, 496; sex not stated, 29.

INTERPRETATION OF BACTERIOLOGICAL EXAMINATIONS.

POSITIVE RESULTS.—It is to be presumed that, in all cases where sputum has been sent to the laboratory for bacteriological examination, there exists in the mind of the attending physician a suspicion of tuberculosis, otherwise he would not go to the trouble of obtaining and sending a sample of sputum to the laboratory; so it may be safely assumed that when the tubercle bacilli are found in such specimens the person is suffering from the disease. Very rarely a few bacilli may perhaps be

found in the mouths of healthy persons; but examinations from such patients are not likely to be made except, possibly, in the instance of other persons, where there is a case of tuberculosis in the family, and even then rarely done, so that the presumption that the person from whose sputum the tubercle bacilli are obtained has tuberculosis. It is therefore reasonably safe to presume that the 368 persons in which the tubercle bacilli were found had some form of tuberculosis.

NEGATIVE RESULTS.—A single negative result does not prove that the tubercle bacilli do not exist in that case, and should not be considered of any importance to the physician; in fact, should several successive negative results be obtained, proof would still be lacking that the patient might not be infected with the disease, and especially should such results be considered as valueless in the event that there are present in the person some clinical evidences of tuberculosis.

Negative results may be obtained under several conditions in cases where the disease exists, especially when it is present in a chronic form, or is of that type known as miliary tuberculosis.

Among the other causes for such results may be mentioned an improper collection of the sputum; the entire absence of the bacilli in the sputum, a result often obtained in cases where there is very little or no breaking down of the lung tissue so as to allow the escape of the bacilli into the sputum; and, furthermore, the bacilli might be present in very small numbers and escape observation under the microscope. Where there is strong clinical evidence of tuberculosis, a single negative result should never change the opinion of the attending physician. Successive examinations should be made from time to time, weekly or monthly, as may be deemed best, until there is a reasonable certainty in the case, although no number of negative results should be permitted to counterbalance in any manner well defined clinical indications of the disease.

DIPHTHERIA.—BACTERIOLOGICAL WORK.

OUTFITS.—A careful consideration was given to the subject of outfits for the collection of specimens in suspected cases of diphtheria. Two methods were found to be in use,—one in which two tubes were used, one containing serum for the growth of the diphtheria bacilli, and the other a swab, and in some instances two swabs, for the purpose of entrapping the bacilli, and then smearing upon the serum in the other tube. In situations in which this method can be constantly supervised and fresh serum tubes substituted for those which become dried, the system is probably the best in existence. The difficulties, however, are so great, by reason of the drying of the serum where these outfits are placed on deposit and not used for some time, that it would seem to be almost impracticable for general state use.

The outfit which was decided upon for our own use, and which is also used with gratifying success in some other states, consists of a single glass tube in which is placed a wire about four inches in length, with cotton swab on the end, the tube plugged with absorbent cotton and closed with rubber cap, all of which is sterilized before being sent out. This tube is placed in a cylindrical wooden screw-cap tube, with directions for taking the specimen, blank upon which to report case, and a piece of gummed paper for the purpose of sealing the case after the specimen has been collected, and the tube replaced. On the outside of the cylindrical wooden shipping case above mentioned is pasted a shipping label, all specimens being sent by express or messenger. When the outfit is sent out from the laboratory, all complete as above described, it is inclosed in a wrapper upon which is the following:

DIPHTHERIA OUTFIT.

FROM N. H. LABORATORY OF HYGIENE.

NOTICE.—The test tube, swab, etc., in this outfit have been carefully sterilized, and should not be uncapped until the physician is ready to take the specimen from the patient's throat.

The inclosed directions must be followed explicitly. Remove this outer wrapper before attempting to open.

The specimen must be sent, by express or messenger (not by mail) to the laboratory either at Concord or Hanover, as may be most convenient.

It will be seen that special efforts are made to put up the entire outfit in such a manner as to insure its delivery to the physician intact, and with such explicit directions that no mistake shall be made.

BLANK.—The blank which is inclosed with the outfit asks for a certain amount of information concerning the case, and also gives directions for taking the specimen, as will be seen:

DIPHTHERIA.

SPECIMEN FOR EXAMINATION.

THIS BLANK MUST BE FILLED IN EVERY CASE.

Doctor's name.....
 City or town.....
 Patient's name.....
 Residence..... Age..... Sex.....
 No. of specimen: 1st, 2d, 3d, 4th, 5th, 6th, 7th.....
 Date of earliest symptoms..... Date culture taken.....
 How contracted.....
 Location of membrane.....
 Was an antiseptic applied to throat within two hours?.....
 No. in family? Adults..... Children.....
 Clinical diagnosis.....

RETURN THIS BLANK, FILLED OUT, WITH THE SPECIMEN.

All charges for transmission must be paid by the party sending the specimen; and also telegraph or telephone charges in reporting results. Shall report be sent by mail, telegraph, or telephone?.....

Send Specimen to Concord or Hanover, as may be most convenient.

Received

Incubator

Result

Reported

Mail, Telephone, Telegraph.

Remarks:

.....

NEW HAMPSHIRE STATE BOARD OF HEALTH.

LABORATORY OF HYGIENE.

DIRECTIONS FOR TAKING SPECIMENS.

The patient should be placed in a good light, and, if a child, held properly. In cases where it is possible to get a good view of the throat, depress the tongue and rub the cotton swab gently, *but freely*, against any visible exudate, *revolving the wire between the fingers*, so as to bring all portions of the swab in contact with the mucous membrane or exudate. In other cases,

including those in which the exudate is confined to the larynx, *avoiding the tongue*, pass the swab back as far as possible, and rub it freely as described above against the mucous membrane of the pharynx and tonsils. Then carefully replace the swab in tube, plug with the cotton, cover with rubber cap in the same manner as it was originally, wrap this blank (after being carefully filled out) around the tube, place in wooden case, screw together firmly, seal with the small strip of adhesive paper, and forward by express, prepaid, as per label, either to Concord or to Hanover, as may be most convenient.

Unsatisfactory cultures, exhibiting insufficient growth or contamination by foreign bacteria, usually result from failure to follow carefully the above directions. A report will be forwarded as soon as possible by mail, telegraph, or telephone.

REASON FOR CERTAIN QUESTIONS.—Occasionally some physicians have sent the blank accompanying the specimen to the laboratory without having properly filled the same. In all cases such blanks will be returned for correction. The laboratory asks for the data for the purpose of compiling certain facts in connection with the work, such as are revealed in the accompanying table. It will be readily seen that, as an illustration of the point which we wish to make, if the patient's name is not given it will be impossible to identify the case in preparing tables, and likewise the number of the examination.

Certain other questions are for practical sanitary reasons, even though the object may not be apparent to every person. The facts given in an individual case might be as such valueless, but when taken in connection with all other cases important deductions can be made, and this is why it is insisted that the blanks sent out in connection with bacteriological examinations for suspected cases of tuberculosis, diphtheria, typhoid fever, malaria, etc., shall be filled.

EXAMINATION OF SPECIMENS.—Arrangements have been made with the American Express Company by which all specimens received up to 9 o'clock P. M. will be delivered the same evening, so that they may be placed at once in the incubator to remain over night for examination the following morning.

The usual process is to uncap the tube immediately, take out the swab and smear it upon freshly prepared serum already in sterilized tubes, and place the latter in the incubator to secure the growth of the bacilli. In extremely urgent cases we have sometimes been able to discover the germ of the disease by microscopic examination of the swab itself, immediately upon arrival, but this procedure is too uncertain in its results to be employed as a general practice.

REPORT TO PHYSICIANS.—The culture is removed from the incubator in the morning, and an examination made to see what growth has developed during the night. As soon as the result of the examination has been

determined, a report is made to the physician by mail, telegraph, or telephone, as he has requested. The official report of the bacteriologist is made upon the following blank:

Laboratory No.....

LABORATORY OF HYGIENE,
NEW HAMPSHIRE STATE BOARD OF HEALTH.
BACTERIOLOGICAL DEPARTMENT.

.....N. H.,.....190....
DR.....

DEAR DOCTOR:

The examination of the culture made by inoculating blood serum with the material found on the swab from the throat of.....
.....
on.....shows does not show the
presence of the diphtheria bacilli.

Remarks:

.....
.....
.....
.....M. D.,

Bacteriologist.

IRVING A. WATSON, M. D.,
Director of Laboratory.

It will be noted in the blank above that the report does not say that diphtheria exists or does not exist, but simply that the examination shows, or does not show, the presence of the diphtheria bacilli. Notwithstanding that much has been written upon the subject of negative results, we have found that some physicians have placed reliance upon a single negative report, which should never be done. It has been the practice in making reports to state under "remarks" that there was no growth, or that other forms of bacterial infection were found, according to the facts revealed. The interpretation, and some other points in connection with bacteriology of diphtheria and other anginas, will be referred to elsewhere.

REPORT OF EXAMINATIONS IN CASES OF SUSPECTED DIPHtheria.

In the table given below are embraced data concerning bacteriological examinations made in cases of suspected diphtheria. It will be seen that 1,185 specimens were examined during the period embraced in this report, taken from 824 individuals. The cases were reported from seventy-two towns and cities in the state. The results of the examinations are given under appropriate headings.

Diphtheria.

CITY OR TOWN.	Number of individual cases.	Number of specimens sent.	First negative.	Second negative.	Third negative.	First positive.	Second positive.	Third positive.	Subsequent examinations.	First negative and second positive.	KIND OF INFECTION.			
											Streptococcus.	Staphylococcus.	Diplococcus.	Bacillus subtilis.
Andover.....	11	17	7	1	1	3	2	1	2	...	2	1	...	...
Antrim.....	3	3	2	...	...	1	...	...	...	...	1	...	...	...
Ashland.....	1	1	...	...	...	1	...	...	...	...	1	3	...	...
Belmont.....	4	4	4	...	...	1	...	...	...	...	...	...	...	...
Bennington.....	4	4	3	...	...	4	...	...	...	...	...	...	...	...
Berlin.....	10	10	6	...	...	4	4	...	...	...	2	3	1	...
Boscawen.....	6	10	4	1	1	2	1	...	1	...	1	1	...	...
Bristol.....	7	9	4	2	...	3	...	...	...	...	1	...	...	...
Campton.....	2	2	2	...	...	...	...	...	...	...	1	...	...	...
Canaan.....	4	4	2	...	...	2	...	...	...	...	...	...	...	...
Canterbury.....	1	5	...	1	...	1	...	1	2	...	...	...	...	...
Center Harbor.....	4	4	4	...	...	...	...	...	...	...	4	...	...	...
Chester.....	2	6	1	3	...	2	...	...	...	...	1	1	...	...
Claremont.....	5	8	3	...	1	2	2	...	...	...	...	...	...	...
Colebrook.....	1	1	...	...	...	1	...	...	...	...	...	...	...	...
Concord.....	340	*598	254	68	46	63	29	16	82	115	70	62	2	...
Conway.....	9	10	7	1	...	...	...	...	...	...	2	2	...	...
Dover.....	6	6	1	...	...	5	...	...	...	...	...	1	...	...
Enfield.....	4	5	4	1	...	...	...	...	...	...	...	...	...	...
Epping.....	7	8	2	1	...	5	...	...	...	...	2	...	...	...
Epsom.....	2	2	2	...	...	...	...	...	...	...	...	1	...	...
Exeter.....	4	4	3	...	...	1	...	...	...	...	2	...	...	...
Franconia.....	1	1	...	...	...	1	...	...	...	...	...	...	...	...
Franklin.....	36	55	27	7	2	10	4	2	3	2	16	6	...	...
Gilsum.....	1	3	...	1	...	1	1	...	...	...	...	...	...	...
Hampstead.....	2	2	1	...	...	1	...	...	...	...	...	1	...	...
Hanover.....	41	45	41	4	...	...	...	...	...	...	5	2	...	...
Haverhill.....	29	37	19	5	...	10	2	1	...	...	8	8	...	...
Henniker.....	2	2	1	...	...	1	...	...	...	...	...	...	...	...
Hill.....	1	1	...	...	...	1	...	...	...	...	...	...	...	...
Hinsdale.....	3	3	1	...	...	2	...	...	...	...	1	...	...	...
Hopkinton.....	1	1	1	...	...	...	...	...	...	...	1	...	...	...
Hudson.....	3	3	1	...	...	2	...	...	...	...	1	...	...	...
Jackson.....	2	2	1	...	...	1	...	...	...	...	...	...	...	...
Keene.....	13	18	10	2	1	4	1	...	...	...	2	1	...	...
Laconia.....	3	3	2	...	1	1	...	...	...	...	...	...	...	...
Lancaster.....	2	2	1	...	...	1	...	...	...	...	...	...	...	...
Lebanon.....	31	47	23	7	1	8	3	2	3	...	5	3	...	...
Lincoln.....	1	1	...	...	...	1	...	...	...	...	...	...	...	...
Lisbon.....	8	8	4	...	...	4	...	...	...	...	...	...	...	...
Littleton.....	5	8	1	...	1	4	...	...	...	...	...	...	...	1
Loudon.....	7	10	7	3	...	...	...	...	...	...	2	...	...	...
Lyme.....	1	1	1	...	...	...	...	...	...	...	...	...	...	...
Manchester.....	47	48	46	1	...	1	...	...	...	...	19	16	...	...
Monroe.....	2	3	2	1	...	...	...	...	...	...	...	...	...	...
Nashua.....	63	67	34	3	1	28	1	...	...	1	9	13	...	...
New Boston.....	2	3	3	...	...	...	...	...	...	...	...	...	...	...
New London.....	1	1	1	...	...	2	1	...	...	...	...	...	...	...
Newport.....	3	4	1	...	...	2	1	...	...	...	...	...	...	...
Northumberland.....	3	3	...	...	...	3	...	...	...	...	...	...	...	...
Northwood.....	2	5	1	...	...	1	1	1	1	...	...	...	...	...
Nottingham.....	2	2	2	...	...	...	...	...	...	...	...	2	...	...
Orford.....	2	3	2	...	...	1	...	...	...	...	...	...	...	...
Peterborough.....	10	10	5	...	...	5	...	...	...	...	2	1	...	...
Pittsfield.....	3	3	2	...	...	1	...	...	...	...	...	...	...	...
Plaistow.....	3	3	3	...	...	...	...	...	...	...	2	1	...	...
Plymouth.....	10	10	8	...	...	2	...	...	...	...	...	3	...	...
Portsmouth.....	10	10	7	...	...	3	...	...	...	...	5	1	...	...
Rochester.....	6	7	4	...	...	2	1	...	...	1	...	2	...	...
Rye.....	1	1	...	...	...	1	...	...	...	...	...	...	...	...

* Fifty-two negative examinations from throats of well persons in an institution where diphtheria had occurred. Six examinations, with positive results, of dust taken from the ventilator of a room in which a case of diphtheria had previously existed.

† In two cases first two examinations were negative and the third positive.

Diphtheria. — Continued.

CITY OR TOWN.	Number of individual cases.	Number of specimens sent.	First negative.	Second negative.	Third negative.	First positive.	Second positive.	Third positive.	Subsequent examinations.	First negative and second positive.	KIND OF INFECTION.			
											Streptococcus.	Staphylococcus.	Diplococcus.	Bacillus subtilis.
Salem.....	1	1	...	...	...	1	...	...	...	...	...	...	...	...
Salisbury.....	4	7	3	2	1	1	...	...	...	...	3	1	...	...
Springfield.....	1	1	1	...	...	...	...	...	...	...	...	1	...	...
Stewartstown.....	4	6	...	...	...	4	2	...	...	...	...	...	...	...
Stratford.....	1	1	1	...	...	...	...	...	...	...	1	...	...	...
Swansey.....	1	1	1	...	...	...	...	...	...	...	...	...	...	...
Tilton.....	1	1	1	...	...	...	...	...	...	...	...	...	...	...
Troy.....	1	1	1	1	...	...	...	...	...	...	1	...	...	...
Wentworth.....	2	2	2	...	...	...	...	...	...	...	1	...	...	...
Whitefield.....	2	2	1	...	...	1	...	...	...	...	...	1	...	...
Wilton.....	2	2	1	...	...	1	...	...	...	...	...	1	...	...
Woodstock.....	3	3	...	...	...	3	...	...	...	...	...	...	...	...
Total.....	824	1185	630	117	56	213	51	24	94	19	175	139	3	1

It will be seen that in the first examination 630 proved negative and 213 positive. In this large number of negative results were included many persons who were not suspected of having the disease, but who had been directly or indirectly exposed. It will, however, be seen in studying the table that in altogether too many instances reliance seems to have been placed upon one negative result, or, in other words, that either the physician was satisfied with such a report as being conclusive, or the case so rapidly improved within a day or so after forwarding the specimen as to remove the suspicion that the case was diphtheria.

The results, as far as the third examination, in the given case are carried out in their regular order; no numerical account is made of subsequent examinations, some of which were for release purposes. In a few cases of suspected diphtheria, some other form or forms of infection existed, as is noted in the table.

Many instances have come up during the work, of which we have special knowledge, where the diagnosis made by the laboratory proved of inestimable value in preventing wholesale exposure to the infection, and, as a consequence, doubtless limited the disease to a single case or family.

TYPHOID FEVER.

The Widal reaction for the determination of typhoid fever is, in a great majority of cases, satisfactory, there being only a small percentage of cases in which it is uncertain. The method, as well as further explanations concerning its reliability as a test, appears in the blank report returned to physicians, a copy of which is inserted in this report.

OUTFIT.—This consists of a short glass tube for the collection of a few drops of blood from the patient, sealing wax to close the tube, a blank upon which to report the case, and directions for taking a sample of the blood. These are all inclosed in a cylindrical wooden screw-cap case, with proper label for forwarding to the laboratory by mail; postage two cents.

The blank referred to is as follows:

TYPHOID FEVER.

SPECIMEN FOR EXAMINATION.

Doctor's name.....
 City or town.....
 Patient's name..... Age..... Sex.....
 Occupation
 Date of earliest symptoms.....Date specimen taken.....
 Has patient previously had typhoid fever?.....
 If so, where?.....
 Present illness where contracted?.....
 Has patient been away during the month previous to illness?.....
 If so, how long ago?.....
 Clinical diagnosis.....

RETURN THIS BLANK, FILLED OUT, WITH THE SPECIMEN.

All charges for transmission must be paid by the party sending the specimen; and also telegraph or telephone charges in reporting results. Shall report be sent by mail, telegraph, or telephone?.....

Send Specimen to Concord or Hanover, as may be most convenient.

Upon the reverse side of the above blank is the following:

Remarks:

.....

NEW HAMPSHIRE STATE BOARD OF HEALTH.

LABORATORY OF HYGIENE.

DIRECTIONS FOR TAKING SPECIMENS OF BLOOD.

The skin covering the tip of the finger, or perhaps preferably the lobe of the ear, should be thoroughly cleansed and then pricked with a clean needle, or slightly incised so as to cause several drops of blood to exude. Four or five drops should be collected in the accompanying glass tube. It should then be carefully sealed with the sealing wax inclosed with tube for that purpose, then wrapped in cotton, or a piece of cloth, to prevent breakage, put into shipping case, cover screwed on tightly, and forwarded by express, *prepaid*, either to Concord or Hanover.

The blank on the reverse side of this sheet must be carefully filled by the attending physician. A report of the result of the examination, as soon as possible, will be sent in the manner directed.

An examination of the same is made as soon as practicable after it reaches the laboratory, and a report is mailed to the physician who sent the sample, upon the following blank:

Laboratory No.....

LABORATORY OF HYGIENE,

NEW HAMPSHIRE STATE BOARD OF HEALTH.

BACTERIOLOGICAL DEPARTMENT.

.....N. H.,.....190....

DR.....

.....

DEAR SIR:

The examination of the specimen of blood taken from.....

.....

on.....shows does not show Widal's reaction
when one part of blood serum is added to.....parts of a bouillon
culture of the typhoid bacillus.

The serum test (Widal) for the diagnosis of typhoid fever is performed in the following way: One part of the suspected blood serum is added to one or more parts of a 24-hour bouillon culture of the typhoid bacillus. When the typhoid reaction appears, the bacilli quickly lose their motility and become clumped together in masses. The substances which cause this reaction are absent, or present to only a very moderate extent, in the blood of those not suffering from typhoid fever, while after the fifth day the blood of those having typhoid fever usually contains these agglutinating substances in abundance—in amounts greatly in excess of that found (except in the rarest instances) in the blood of those who have not, or have not had, typhoid fever.

The serum test, as seen from the above statement, is quantitative rather than qualitative. The examination should therefore not only determine the presence or absence of agglutinating substances, but their amount. The results so far obtained indicate that we are safe in drawing the following conclusions:

1st. That the patient in all probability has typhoid fever, or has had it within one year, in those cases in which the reaction occurs promptly upon the addition of one part of blood serum to nine parts of a bouillon culture of the typhoid bacillus.

2d. That if a marked reaction occurs when one part of blood serum is added to nineteen or more parts of a bouillon culture, the probability that the patient has typhoid fever becomes almost a certainty.

The agglutinating substances do not usually appear in the blood in sufficient amount to give the reaction until the fourth day of the disease. From the fourth to the seventh day of the disease specimens of blood serum from typhoid patients give the reaction in about 70 per cent; from the eighth to fourteenth day in about 80 per cent; and during the third and fourth weeks in about 90 per cent of the cases.

In from 5 to 10 per cent of the cases of typhoid fever the blood does not at any time in the course of the disease give a prompt and complete reaction, when one part of the blood serum is added to ten or more of the culture. The absence of the reaction in any individual case does not, therefore, positively exclude the diagnosis of typhoid fever.

.....M. D.,
Bacteriologist.

IRVING A. WATSON, M. D.,
Director of Laboratory.

INTERPRETATION OF RESULTS.—In addition to the opinions already expressed, the physician should make certain whether or not the patient had had typhoid fever, or an illness resembling that disease, in a recent period prior to the present illness, as in such case the infection sometimes exists for a considerable period. It would be necessary to exclude such possibilities, and this being done it could be safely assumed that a positive reaction indicated typhoid fever to a certainty. A negative result should be considered as of little or no importance in the case, for the reason that the Widal reaction does not usually develop before the fifth day, and may not until late in the disease, and is said not to be constantly present during all periods of the disease; so that both positive and negative reactions might be obtained during the continuance of the disease. It will be seen, therefore, that a negative reaction means nothing, while a positive reaction may, of course, be relied upon.

In the following table are given the results of examinations made at the laboratory from May, 1901, to October 1, 1902:

Typhoid Fever.

CITY OR TOWN.	Number of cases examined.	Positive.	Negative.	Doubtful.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	Age not stated.	Male.	Female.	Not stated.	Number of examinations.
Acworth.....	1	1				1										1		1
Allenstown.....	3		3				1			1	1					2	1	3
Alstead.....	1		1			1										1		1
Barrington.....	1		1			1										1		1
Belmont.....	1		1			1												1
Bristol.....	2	1	1		2											1		2
Claremont.....	10	4	6			3	2	2	2	1						4	6	11
Concord.....	14	7	7		1	3	5	2								8	4	15
Dover.....	2	1	1			1	1						1	2		2		2
Franconia.....	1		1			1										1		2
Franklin.....	5	4	1			2		2		1						3	2	5
Haverhill.....	11	3	8			2	6	2	1							8	3	13
Hillsborough.....	1		1		1											1	1	1
Hinsdale.....	2	1	1			2										1	1	2
Hudson.....	3	2	1			1	2									1	2	4
Keene.....	1		1							1						1		1
Lancaster.....	1			1				1								1		1
Lebanon.....	1	1				1										1		1
Lisbon.....	1		1				1									1		2
Littleton.....	2		2			1		1								1	1	2
Manchester.....	4		4				1	1		2						2	2	5
Meredith.....	1	1					1									1		1
Nashua.....	15	3	12		2		5	5	1	1	1					8	7	18
Newport.....	10	6	4			3	3	2	2							3	7	12
Portsmouth.....	1	1									1					1		1
Rochester.....	2	1	1					1		1						1	1	2
Seabrook.....	1		1		1											1		1
Somersworth.....	1	1			1											1		1
Swansey.....	1		1					1								1		1
Tilton.....	1	1				1										1		1
Warren.....	1	1				1										1		1
Wilton.....	1		1					1								1		1
Winchester.....	2	1	1					1		1						1	1	2
Total.....	106	41	64	1	8	23	32	21	8	9	2		1	2	53	51	2	118

An examination of the above table shows that blood specimens were sent to the laboratory from 34 towns and cities, aggregating 106 cases, of which 41 gave a positive reaction, 64 a negative reaction, and 1 was classed as doubtful. The total number of examinations made was 118. The age and sex of patients are also given. In many instances the Widal reaction determines the diagnosis for the attending physician,—a matter of a great deal of importance, since in the event that the result is positive the physician and health officer are prepared to take such means as may be necessary to limit the spread of the disease. The physician is better prepared to treat his patient properly, and will, of course, see that proper disinfection of excreta, etc., is constantly maintained. It also suggests to the health officer the necessity of making a search for the source of infection. The great value of this test, of course, applies in cases where the diagnosis is uncertain. In a well-marked, typical case of typhoid fever the Widal reaction would not be necessary to determine the nature of the malady.

MALARIA.

OUTFIT.—The outfit for the collection of a sample of blood to be examined for the plasmodium of malaria consists of a small tin box with hinged cover, inside of which are placed two covered glasses to be used in accordance with directions, together with the following blank:

MALARIA.

BLOOD FROM A SUSPECTED CASE.

Doctor's name.....
 City or town.....
 Patient's name..... Age..... Sex.....
 Occupation
 Date of earliest symptoms.....Date specimen taken.....
 Symptoms present.....

 Probable source of infection, if any suspected.....

 Date or season of last former attack, if any.....
 Any quinine or other medicine administered before preparation of smears?

RETURN THIS BLANK, FILLED OUT, WITH THE SPECIMEN.

All charges for transmission must be paid by the party sending the specimen; and also telegraph or telephone charges in reporting results. Shall report be sent by mail, telegraph, or telephone?.....

Send Specimen to Concord or Hanover, as may be most convenient.

This outfit may be sent by mail.

On the reverse side is the following:

Remarks:

.....

NEW HAMPSHIRE STATE BOARD OF HEALTH.

LABORATORY OF HYGIENE.

The tip of a finger or the lobe of one ear is thoroughly cleansed with soap and water and dried carefully. An ordinary surgeon's needle, previously passed through the flame of an alcohol lamp or a gas-burner, or held over

the chimney of a lighted kerosene lamp for a few seconds, to sterilize it, is used to prick the part until a small drop of blood exudes. This should be wiped away with a clean cloth and the second drop used. This is touched with the edge of a cover-glass, and the edge carrying the drop placed on a second cover at an angle of 20 to 30 degrees and drawn across its entire face. A thin smear or film of blood will be deposited on the second cover, which dries rapidly. *Three* or *four* such smears should be prepared if possible, each one from a freshly exuding drop, and laid down to dry. The points to be borne in mind in this operation are great cleanliness, rapidity of work, and the use of a fresh drop of blood, as the corpuscles shrivel soon, after exposure to the air.

The smear should be very thin, so that the corpuscles may be fixed almost instantly on the glass by drying. The thinner the smear, other things being equal, the more perfect the preservation of the corpuscles. A thin smear cannot be obtained from a large drop of blood. When the cover-glasses are thoroughly dry—usually in fifteen to thirty seconds—they are wrapped separately in the paper provided, and replaced in the box. This should be filled with the paper, so that the glasses cannot move about.

The best time for taking the blood is about eight hours before or after the chill. Smears prepared after the administration of quinine may not contain malarial parasites in numbers sufficient to be detected, and the microscopic diagnosis in such cases may be misleading. In a small percentage of cases of malaria, the blood from the skin may not at any one time contain parasites enough to be detected. Hence the non-discovery of these organisms in such rare cases does not negative the clinical diagnosis of malaria.

During the period embraced in this report only ten specimens of blood in cases of suspected malaria were sent to the laboratory. These were received from the following-named towns: Barrington, Dover, Hanover, Lancaster, Nashua, and Portsmouth. The malaria plasmodium was found in only one instance, the other specimens giving negative results.

PLACES WHERE BACTERIOLOGICAL OUTFITS MAY BE FOUND.

For the convenience of the physician who desires an outfit in the shortest possible time, we have established stations where these supplies may be found in different sections of the state. We have, in most instances, chosen drugstores suggested by physicians themselves, although when more places were named in a given locality than we deemed necessary we have selected one or more, and the physicians in the vicinity have been notified.

In some towns where no drugstore exists these supplies have been placed with some physician.

The profession have found this arrangement of great convenience and very satisfactory. Supplies are, however, mailed directly from the laboratory to the physician when so requested; but we prefer, for our own convenience, that they be obtained from the station in the physician's immediate vicinity.

Below is a list of stations:

- Allenstown, supplied from Suncook.
- Amherst, supplied from Milford.
- Andover, supplied from Franklin Falls.
- Antrim, Frank Dickey, druggist.
- Ashland, W. F. Brown, druggist.
- Belmont, E. C. Bean, druggist.
- Berlin, Charles R. Denning, druggist.
- Bethlehem, H. P. Smith, druggist.
- Bristol, Fowler & Co., druggists.
- Canaan, E. M. Allen, druggist.
- Charlestown, George Nourse, druggist.
- Claremont, George A. Briggs, druggist.
- Colebrook, Charles S. Aldrich, druggist.
- Concord, Arthur E. Clarke & Co., druggists; A. P. Fitch, druggist;
- Arthur H. Knowlton, druggist; George A. Berry, druggist.
- Conway, G. W. Shaw, druggist.
- Derry, West, H. Benson, druggist.
- Dover, Lathrop & Pinkham, druggists.
- Enfield, F. B. Williams, druggist.
- Epping, A. C. Buswell, M. D.
- Exeter, Weeks & Seward, druggists.
- Farmington, W. J. Evans, druggist.
- Franklin, Woodward Brothers, druggists.
- Franklin Falls, George R. Kempl, druggist.

Goffstown, S. M. Johnson & Co., druggists.
Greenville, Dr. Charles E. Hall, druggist.
Greveton, John M. Wilson, druggist.
Hanover, Dr. H. N. Kingsford.
Haverhill (see Woodsville).
Henniker, W. N. Whitney, druggist.
Hillsborough, C. S. Perry & Co., druggists.
Hinsdale, Fred H. Jones, druggist.
Jaffrey, East, George H. Duncan, druggist.
Keene, Ballard & Shedd Co., druggists.
Laconia, J. H. Story, druggist.
Lakeport, Plummer & Thompson, druggists.
Lancaster, P. J. Noyes & Co., druggists.
Lebanon, Dr. I. N. Perley, druggist.
Lisbon, F. N. Kincaid, druggist.
Littleton, C. F. Davis & Co., druggists.
Manchester, Board of Health; L. G. Gilman, druggist; George A. Hanscom, druggist; Marshall & Knowlton, druggists; Potvin & Co., druggists; A. J. Precourt, druggist; F. H. Thurston, druggist; F. L. Way, druggist.
Meredith, C. W. Morrison, druggist.
Milford, W. F. French, druggist.
Milton, J. H. Willey, Ph. G., druggist.
Nashua, A. E. Wallace, druggist.
New Boston, F. A. Greer, druggist.
Newport, Fred E. Lovell, druggist.
Northwood Ridge, C. V. Fiske, M. D.
Ossipee, E. B. Andrews, M. D.
Pembroke, supplied from Suncook.
Penacook, C. H. Fowler, druggist.
Peterborough, George L. Forbush, druggist.
Pittsfield, V. A. Grant, druggist.
Plaistow, Edmund H. Noyes, M. D., chairman board of health.
Plymouth, Fred W. Brown, druggist.
Portsmouth, A. P. Preston, druggist.
Rochester, R. Dewitt Burnham, druggist.
Rollinsford (see Salmon Falls).
Salmon Falls, George W. Nutter, druggist.
Somersworth, Daniel J. Buckley, druggist.
Suncook, George E. Gordon & Co., druggists.
Tilton, C. P. Herrick, druggist.
Walpole, W. D. Knowlton & Co., druggists.
Warner, Kempl & Royder, druggists.

Whitefield, W. C. Leonard, druggist.

Wilton, W. I. Durgin, druggist.

Winchester, William W. Nash, druggist.

Wolfeborough, E. H. Thompson, druggist.

Woodsville, E. B. Mann & Co., druggists.

The outfits supplied at the above stations are those used in bacteriological work in connection with tuberculosis, diphtheria, typhoid fever, and malaria.

Containers for the collection of samples of water for chemical analysis must be obtained directly from the laboratory at Concord. We wish again to notify the public that it is useless to send samples of water collected in any but the bottles sent out from the laboratory, which in all instances are forwarded by express free of expense. Water sent in old bottles, jugs, or any other convenient receptacle will not be analyzed at the laboratory.

MISCELLANEOUS PAPERS ON VARIOUS
SUBJECTS.

MISCELLANEOUS PAPERS.

REPORT ON DIPHTHERIA BACILLI IN WELL PERSONS.*

BY A COMMITTEE OF THE MASSACHUSETTS ASSOCIATION OF BOARDS OF
HEALTH.†

FIRST PART.—EXECUTIVE.

Your committee when first appointed, July, 1900, attempted by a circular letter to learn what was being done in different American cities with well persons infected with diphtheria bacilli, and what were the views of the health officers as to the proper methods of controlling such cases. A summary of the replies received was presented at the association meeting held January 24, 1901. The replies showed that in only two cities, Baltimore and Providence, was a systematic attempt made to isolate well persons carrying diphtheria bacilli, that this rule applied chiefly to members of families in which clinical diphtheria existed, and that in Baltimore it applied chiefly to the school children in such families.

It was found that few data were available concerning the occurrence of diphtheria bacilli in well persons; and it was deemed advisable to institute, on a co-operative basis, an extended series of observations which would give us more accurate knowledge on this point. A circular letter asking for such co-operation was sent to about twenty bacteriologists. A number of favorable replies were received, and the following-named actually entered into the work:

Boston, Mass., Dr. H. W. Hill and Mr. B. R. Rickards, with Dr. A. A. Taft.
and Drs. D. N. Blakely, W. S. Boardman, Paul Carson, John Duff, Theo.
C. Erb, C. O. Kepler, C. Morton Smith, John T. Sullivan, and A. A. Wheeler.
Brookline, Mass., Dr. F. P. Denny.

Lowell, Mass., Dr. T. B. Smith.

Minnesota, Drs. F. F. Wesbrook, L. B. Wilson, O. McDaniel, and E. H. Beckman.

Newton, Mass., Dr. Arthur Hudson.

New York City, Dr. W. H. Park, with Dr. A. W. Williams.

* That is, "well" so far as the throat or nose is concerned.

† We reprint this valuable report from the *Journal of the Massachusetts Association of Boards of Health*. It comprises much original work by able and well qualified investigators, and is an important addition to the literature of the subject.

I. A. W.

Ontario, Canada, Dr. J. A. Amyot.

Providence, R. I., Dr. C. V. Chapin and Prof. F. P. Gorham.

Springfield, Mass., Dr. H. C. Emerson.

Waltham, Mass., Dr. C. A. Willis, with Drs. W. E. Fernald, I. H. Ladd, and George L. Wallace.

Washington, D. C., Dr. W. C. Woodward and Dr. John E. Walsh.

Willard State Hospital, N. Y., Dr. W. A. Macy and Dr. Erving Holley.

The association will doubtless join the committee in expressing their thanks to those who, though some of them not members of the association, so willingly assisted in our undertaking.

The results of these investigations are given in detail in the second part of this report.

PREVALENCE OF DIPHTHERIA BACILLI IN WELL PERSONS.

Of the questions before the committee, the first which they have attempted to answer is, how frequently diphtheria bacilli are found in well persons.

All observers are not in accord as to the morphological appearances which are to be considered as characteristic of this organism. Some agree with Westbrook in the belief that diphtheria bacilli are found to present all the forms named by him. Others admit the validity of only a portion of these types. Some do not believe that the so-called pseudo-diphtheria bacillus, the short solid-staining type, is a true diphtheria bacillus, while others are entirely satisfied that it should be classed with *B. diphtheriæ*.

In order to answer, from the collected data, the question of the degree of prevalence of diphtheria bacilli in well persons, it may be allowed to the different observers to state for themselves how many of their cultures they would, in the vernacular of the laboratory, have reported as "positive." Not all responded to this request.

In Boston, about 1 per cent were considered positive; in Brooklyn, 2.3 per cent; in Lowell, 1.2 per cent; in Springfield, 1.6 per cent; in Providence, 9 per cent; and in the District of Columbia, 22 per cent. These figures are chiefly interesting as indicating the divergent views of bacteriologists, and as explaining the widely different results hitherto obtained by different observers; although it is probable that the actual prevalence itself varies in different places to some extent.

Another way of stating the results of this work was for the committee to assume that certain forms would, by the majority of bacteriologists, be considered as diphtheria bacilli. The forms which the committee thinks would usually pass as diphtheria bacilli are Westbrook's A, C, and D. On this basis it was found that 2.89 per cent of the total persons examined (nose and throat) were infected with diphtheria bacilli, or, leaving

out the returns from Minnesota, 1.39 per cent. It may be observed that the number reported positive did not correspond in all cases with the number of persons showing A, C, D.

The bacteriological examinations made by members of the committee and those who worked with them, except certain cases classified as "special," not included in the main tables, and many of the Minnesota results, were confined to persons who had not, so far as known, been recently exposed to diphtheria. When examination is made of the throats of those who have recently been in more or less direct contact with diphtheria, infection is found more frequently. No observations on this point were undertaken by the committee; but, from the investigations of Chapin, Denny, Kober, and Park, it is probable that from 8 to 50 per cent of the well persons in families where there is diphtheria are infected with the bacilli.

In institutions, particularly institutions for children, where diphtheria has prevailed, the infection appears often to become more general; and a considerable number of the children will often be found to have diphtheria bacilli in their throats or noses. Occasionally cases of true diphtheria develop, or perhaps marked outbreaks occur. Wesbrook reports such a condition in a school at Owatonna, Minn., and in Bethany Home, Minneapolis; a similar experience was met with in an orphan asylum in Providence. It is to be noted that the types on which this wide distribution was determined included many others besides A, C, and D, and that the diagnosis of a large part of the infection observed was based on the presence of the solid forms.

The committee feels justified in the inference that, in urban communities, at least 1 to 2 per cent of well persons among the general public are infected with the types A, C, and D, and that where well persons are exposed to diphtheria, as in families, schools, or institutions where cases exist, the number infected is much larger, and may range from 8 to 50 per cent.

The estimates just given in the last paragraph refer to the prevalence of the typical granular types of diphtheria bacilli. If the solid and barred types be also forms of this organism, it is very much more widely distributed than is above assumed. The question as to what should properly be considered diphtheria bacilli is discussed at length in the second portion of the report.

VIRULENCE OF THE DIPHTHERIA BACILLUS AS FOUND IN WELL PERSONS.

There is no doubt that even the most typical forms of diphtheria bacillus vary greatly in virulence and power to produce toxins. Oftentimes cultures will produce no constitutional symptoms when injected into guinea

pigs; and, as is well known, persons with morphologically typical bacilli in their throats may remain free from all clinical symptoms, and may mingle freely with others without spreading the disease.

It would be of decided advantage to know whether the bacilli found in well persons are usually virulent or not. There are two ways of determining this.

A. By the Guinea Pig Test.

The probable value of this test and the method of its application will be discussed in the second part of the report. Suffice it to say here that a sufficient number of tests have not been reported to the committee on which to base any very general conclusions. However, those that have been reported resulted as follows: Forty-seven pure cultures of Westbrook's types A, C, and D, obtained from well persons, were inoculated into guinea pigs. Of these, 17 per cent were virulent. Of the types other than A, C, and D, thirty-nine inoculations were made; and 7.5 per cent proved to be virulent. All these latter positive results were from Providence. Gorham was the only observer to report virulent pure cultures of the solid-staining types C² or D². Westbrook also at times has found these types virulent, but made no virulence tests in this particular investigation.

B. By Clinical Evidence.

We may perhaps learn from clinical experience whether well persons with bacilli in their noses or throats do really give the disease to others. A number of our correspondents have reported instances in which it seems very certain that this was the case. (Preliminary Report; Journal Massachusetts Association Boards of Health, January, 1901.) On the other hand, it may be argued that the bacilli carried by well persons are frequently, perhaps most frequently, non-virulent for two reasons: first, the persons themselves are not sick; and, second, diphtheria is not so common as it would be were virulent bacilli constantly distributed by the considerable number of infected well persons. If immunity, natural or acquired, be as widespread as stated by some authorities, these reasons would of course lose their weight.

The committee seems to be justified in concluding from an examination of the experimental and clinical evidence at hand that only a small percentage of the morphologically typical diphtheria bacilli found in well persons not recently exposed to the disease are virulent; but the number of infected individuals well enough to mingle freely with others is so great that, even if only a small proportion of them be likely to transmit the disease, there is in them a very important factor in the spread of diphtheria.

DANGER OF INFECTION FROM HEALTHY PERSONS.

The danger from a healthy person depends on the age, the habits, the surroundings, the occupation, and the intelligence of the infected person.

A child who is constantly putting his hands and everything else into his mouth, and who plays with susceptible children of similar habits, is more likely to spread the disease than an adult. Infected individuals of cleanly habits are less likely to disseminate bacilli than the uncleanly.

The danger from an infected person depends also on his surroundings, whether he comes in contact with other individuals in such a way that he is likely to infect them. Thus in a crowded tenement the opportunity for spreading the infection is much greater than it is in a private house. In institutions, infected persons are much more likely to spread the disease than elsewhere.

The occupation of the individual is very important. Thus persons who are engaged in handling articles of food (like milkmen) and those whose work brings them in close contact with small children (like nurses) are more likely to spread the disease than day laborers or clerks.

The intelligence of a person should be considered. An intelligent person can easily be taught to take a few simple precautions which will greatly reduce the risk of infecting others, without imposing any serious restrictions upon him. The manner in which the infection is spread can be explained to him. He can be taught to sterilize everything which comes in contact with the secretions of his mouth or nose, and to avoid sneezing, coughing, or even talking toward and in close proximity with another person. A few simple precautions of this sort, carried out by an intelligent person, will greatly lessen the danger of infection.

The danger from the rooms occupied by a healthy infected person is very slight. It is probably no greater than that of an electric car or any other much frequented public place into which some infected persons are undoubtedly coming very often.

CONCLUSIONS.

In the conclusions it is recognized that there are two classes of persons carrying diphtheria bacilli to be considered.

A.

There are scattered among the general public a considerable number of persons, not recently and directly exposed to the disease of diphtheria, who have typical diphtheria bacilli in their throats. Our observations show the average, for all places reporting, to be nearly as high as 3 per cent, or in the East 1.39 per cent. This would mean in Boston, if the

smaller figure be used, about 8,000 such cases. The mere statement of this fact shows how entirely futile it is to attempt to seek out and isolate the whole of this number. If this cannot be done, it is useless and unjust to isolate the small number that it may be possible to discover. The committee is therefore led to adopt the following as its first conclusion:

Conclusion I. It is impracticable to isolate well persons infected with diphtheria bacilli, if such persons have not, so far as known, been recently exposed to the disease.

If it happens that such cases come to the knowledge of the health officer, it would, however, be wise to give instructions in regard to caring for the secretions, thus placing a part of the responsibility of the case upon the infected person himself.

B.

It may be assumed, and with some show of probability, that the bacilli in well persons, recently exposed to diphtheria, are more likely to be virulent than are others, and it might be attempted to isolate all members of families where diphtheria exists, so long as the bacilli are found in the throat or nose; but there are difficulties in the way. Such a procedure would, in many cases, lengthen the period of the family isolation, and prove most exasperating to the family and to the medical attendant. Wage-earners, business and professional men, would be kept at home and away from important work. It is difficult to maintain the isolation of the patient during a long convalescence; but it is far more difficult to isolate a person who has not been sick at all. It is very difficult to persuade a man that he should remain at home because he has diphtheria bacilli in his throat, when one is obliged, in answer to his inquiry, to admit that there are hundreds of others going freely about, although infected like himself. It is usually useless to try to tell him that the conditions are different in his case, that his bacilli are derived from a recent case, and have been proved virulent. He will not accept the reasoning, and very likely his medical adviser will not accept it.

If, instead of a single throat culture, as is required in most places, two successive negatives from nose and throat are made necessary for release, the difficulties will be still further increased; and, if two negatives are not required, many infected will escape, and the object of the whole procedure will be defeated.*

Since the number of persons among the general public who are infected with diphtheria bacilli and who pass unrecognized and unrestrained may

* This method of keeping at home those members of families in which diphtheria exists who are infected with diphtheria bacilli was carried out very faithfully in Providence for a period of five years, but has been abandoned because it met with very decided opposition from both the laity and the medical profession; it should be noted that in Providence only one throat negative was required for release.

at any one time be greater than the number of infected persons in diphtheria families, it does not seem to be expedient to place restrictions upon the latter except when it can be done without causing much friction or hardship, or unless the danger in any particular instance can be shown to be very considerable.

The committee is therefore led to its second conclusion:

Conclusion II. It is not advisable as a matter of routine to isolate from the public all the well persons in infected families, schools, and institutions.

It is advisable to keep the children in infected families away from day school, Sunday school, and all public places, and that they should remain on their own premises, if possible.

Wage-earners may usually be allowed to continue their work; but teachers, nurses, and others who are brought in close contact with children should not be allowed to do so. Milkmen should not be allowed to continue their business.

When it is proposed to remove a well person from an infected family, it is not advisable to make the removal if diphtheria bacilli are present.

In schools and institutions it is usually advisable, if the infection is not too widespread, to separate from the others all infected persons, sick or well.

When diphtheria appears in a community which has for some time been free from it, it is advisable to isolate all persons who have been brought in contact with the patient until it shall have been shown that they are free from diphtheria bacilli.

While believing that it is not possible in the majority of cases to isolate well persons infected with diphtheria bacilli, we believe that the attempt should be made to educate the public to care for their persons and their secretions so as to avoid, as much as possible, the danger of infecting themselves or others. The committee would again call attention to the suggestions made at a former meeting for teaching cleanliness to school children, and similar advice might be profitably given to the members of families where diphtheria exists.

In thus putting before the association the results of both practical and experimental work concerning diphtheria bacilli in well persons, the committee does not wish to be understood as minimizing in any way the possible danger of bacilli-carriers to their environment. It has simply recommended what appears to be the most expedient course to pursue after considering the various conflicting interests of the public and the infected individual. The responsibility is largely shifted to the latter, and in the case of intelligent persons the individual responsibility in disseminating disease should be clearly placed before the infected person.

The various local health authorities, in accepting these suggestions, must necessarily exercise increased care, watchfulness, and discrimination, and should be prepared at any time whenever special circumstances warrant it to isolate any and all persons who are discovered with presumably virulent diphtheria bacilli.

SECOND PART.—BACTERIOLOGICAL.

The fact that diphtheria bacilli may, and frequently do, persist in the throat and nose of patients some time after recovery, and that even persons not clinically diseased may, in certain instances and for a variable period of time, harbor virulent bacilli, is entirely in harmony with our knowledge concerning the relation of disease germs to the individuals liable to their attack.

Before discussing its significance more in detail, it may be stated that the causal relation of the Klebs-Loeffler bacillus to what is clinically known as diphtheria is as firmly established as that of any of our well-known pathogenic bacteria to their respective diseases. This is based on the following facts:

1. The Klebs-Loeffler bacillus is the only species regularly present in diphtheria. It is most abundant at the height of the disease, and disappears soon after convalescence.
2. This bacillus produces a poisonous substance, or toxin, which after injection into animals produces inflammatory and hæmorrhagic œdemas, necrosis, or sloughing of tissues, and paralysis.
3. The antitoxin produced by the injection of the toxin is specifically preventive and curative.

The popular conception that disease germs enter, permeate, and then pass out of the body like an orderly army without stragglers is not confirmed by observation or experiment. There are two opposing forces in every infectious disease, and the variation in the resistance of the individual and in the virulence of the bacteria make the resultant disease a very variable quantity. The same is true of the final exit and destruction of bacteria after recovery, and leads to the inference, proved in a variety of diseases, that persons, to all appearances well, may carry disease germs. There is no basis for the belief that such bacteria are necessarily non-virulent. Their harmlessness to the carrier may simply be an expression of his immunity, either inherited or acquired at some earlier period through disease. Laboratory tests show clearly that such microbes, when identified as belonging to one or the other species of pathogenic bacteria, are, as a rule, of the usual virulence.

These organisms are frequently carried in such a way as to be easily shed, and hence to be a source of danger to others. Thus in chronic pulmonary tuberculosis a person may for years expectorate immense num-

bers of tubercle bacilli. In individuals who have recovered from typhoid fever the fæces, and particularly the urine, may contain typhoid bacilli for a time. Mild cases of typhoid, not recognized, may lead to epidemics. In Asiatic cholera the spirilla have been found in the stools of well persons living within the infected area. It is probable that in influenza the microbe may vegetate on the mucous membrane for some time after recovery. Lastly, it has been known for over twenty years that the diplococcus of croupous pneumonia flourishes on the mucous membrane of the throat of certain persons.

If we consider for a moment this list of pathogenic bacteria likely to survive the disease they produce, we find that they peculiarly represent those maladies having a starting-point, or producing lesions, in the mucous membranes. The diphtheria bacillus vegetates chiefly on the surface, sending its toxin inward, and this localization of the bacilli gives them a special opportunity to escape destruction by the body and to vegetate in immune individuals for a time. In fact, we need not be surprised if in the future more persons shall be found carrying these bacilli than the present figures indicate.

As there is no sharp line to be drawn between the healthy and the diseased state, one shading imperceptibly into the other, so there is no sharp line to be drawn, for many infections at least, between the time when the micro-organisms are still in the body and when they have all been destroyed or eliminated. It follows logically, as is shown by the work of certain members of this committee, that well persons may be at times the source of infectious diseases.

In the capacity of bacteriologists it becomes our duty to emphasize the facts that well persons may be the source of virulent disease germs, and that public health authorities cannot concentrate their attention on health and disease as such, but must take cognizance first and foremost of the whereabouts of disease germs; and in so doing they practically admit that the carrier of such germs, even if well, may be fitly compared to the spark which may or may not start a conflagration.

The measures to be carried out in dealing with individual carriers, when discovered, must be left for the health officers to devise. Such measures will naturally depend on the relative dangerousness of the disease involved, on the relative ease with which the bacteria may be disseminated, and, in fact, upon a number of conditions which do not come within the scope of the bacteriologist, but which must be settled on purely practical grounds.

TECHNICAL RESULTS.

The following is a report of the results of the investigations which have been carried out by the committee, together with a simple statement of

our present knowledge of the diphtheria bacilli found in healthy persons.

The chief objects of the investigations have been to determine: first, the frequency of the different forms of diphtheria-like bacilli in healthy persons; and, second, the virulence of the different forms.

A number of laboratory workers were asked to examine separate cultures from the nose and throat of healthy persons, to record, according to Westbrook's classification, all the diphtheria-like bacilli which were found, to state whether or not they would report the cultures containing such forms as positive or negative if the cultures were taken for release, and finally to isolate these forms in pure culture and to test their virulence on guinea pigs.

The number of persons which have been examined and so recorded that they could be classified on the basis intended, is 3,953. They were as follows:

1. In the Minnesota State Board of Health Laboratory in Minneapolis, 1,154 children and adults in institutions.
2. In the Boston Board of Health Laboratory, 892 adults in prison and pauper institutions.
3. In the Providence Board of Health Laboratory, 541 school children, 376 tramps, 10 smallpox patients; total, 927.
4. In the Lowell Board of Health Laboratory, 250 cotton-mill hands.
5. In Washington, 205 children and adults in a hospital, and 16 health department officials; total, 221.
6. In Springfield, 64 school children, 121 male prisoners in jail; total, 185.
7. In the Brookline Board of Health Laboratory, 129 school children.
8. In the Willard State Hospital for the Insane, 82 inmates.
9. In the Newton Board of Health Laboratory, 63 women students at Wellesley College.

10. In Ontario, 50 patients and attendants in a general hospital.

The virulence of the bacilli in 86 cultures was tested.

In addition to the above, cultures from 1,536 persons were taken in Boston, Brookline, New York, and Waltham; but from the incompleteness of their records they could not be classified with the others, and are therefore grouped together under the head of "special cases."

The committee had hoped to have larger and more complete returns, and especially a larger number of examinations of persons living outside of institutions. Insufficient time and the inability to get permission to make cultures were the causes of this deficiency.

The work of tabulating the returns to show the relative frequency with which the different types were found in different places and in different classes of cases was very great, and was done by the secretary of the com-

mittee, Dr. Hibbert Winslow Hill. The tables in their final form were made largely by Dr. F. F. Wesbrook, who gave much time to this work. A few words in explanation of Wesbrook's classification of types of *B. diphtheriæ*.

WESBROOK'S CLASSIFICATION.—Wesbrook divides all the forms of diphtheria bacilli into three groups, according to their staining reactions. Those with deeply-staining granules he calls "granular forms," those with transverse bands "barred forms," and those staining evenly "solid forms." He further divides each of the groups into seven types according to shape and size. The types are designated by the letters A to G. Each individual type of the granular group is designated by a simple letter, A, B, C, etc.; the barred forms are called A¹, B¹, C¹, etc.; the solid forms are A², B², C², etc. The types are progressively smaller from A to G in each group.

The different types have been very well represented in plates which were published with Wesbrook's original article.* Through the courtesy of Dr. Wesbrook all the workers were furnished with these plates, so that they might be kept before them while making the examinations. In every culture showing diphtheria-like bacilli the forms present were recorded according to Wesbrook's types on charts which had been arranged by Dr. Wesbrook. We have found this classification to be a very rational one and very helpful in the work. It has made possible a comparison of results which could not have been accomplished in any other way. The difficulty in comparing the results hitherto obtained by different investigators has been that they have not classed as diphtheria bacilli the same types of bacilli. By the method of recording the types present, irrespective of personal views as to the propriety of classing the forms as true diphtheria bacilli, the question of what forms to consider as *B. diphtheriæ* is left to those who may make use of the results. The personal equation may thus be eliminated to a great extent.

This method has also given an opportunity to compare the relative frequency of the different forms of bacilli in different localities. The differences in some instances have been striking. The most marked are found between the results obtained in Minnesota and those in the laboratories in the East. While almost all the forms were more prevalent in Minnesota, the contrast is especially marked in the granular forms A, C, and D, which are nine to ten times as frequent there as they are in the East.

In considering such differences, allowance must be made for three variables:

* Transactions of the Association of American Physicians, 1900. Also see Minnesota State Board of Health Report, 1899-1900.

1. The personal equation of the observer, under which must be included technique of preparation, and classification.

2. The individuals from whom the specimens were obtained; whether they had been recently exposed to diphtheria or not; whether they were massed in such a way as to facilitate exchange of nose and throat contents.

3. Actual differences in locality, with the variables in conditions incident to this alone.

In the Minnesota examinations, cultures were taken almost altogether from children in institutions in which diphtheria had existed from one to eighteen months previously. This was unavoidable at the time when the investigations were asked for. It seems worthy of remark that in 316 day-school children (Park Rapids), from whom cultures were taken at the beginning of school in September, in a town where diphtheria had existed for eighteen months (this constituting the reason for the examination), the percentage of infection with types C, D, and A, was higher than that found in the East, and higher than in Brookline, where the 129 examinations listed were made under somewhat parallel conditions. It was, however, lower than that found in the other Minnesota examinations, except in a wholly diphtheria-free institution (Catholic Orphan Asylum) where the per cent affected approximated that found in Boston. This seems to bear directly on infection in general, indicating that infection is much more apt to be widespread amongst children in institutions than in day-school children.

As a further illustration of this variation of types in different localities, the results of the examinations of throat cultures by the New York City Board of Health show even a higher percentage of infection with the more generally recognized types of *B. diphtheriæ* (C, D, and A) than Minnesota. There had been more or less exposure in this case also. Further examples are afforded by three observations along somewhat different lines: 1. Gorham found that the types present in Providence in clinical diphtheria ran very considerably smaller than those in Boston (Hill) when actual comparison was made under similar conditions. 2. Wilson of Minnesota found branching forms of *B. diphtheriæ* in abundance in Boston, although they have been seen only three times in Minnesota. 3. Amyot of Ontario states that the types vary with the locality, to some extent, since, in studying clinical cases bacteriologically, he was able to distinguish between two specific localities by the types present.

The results in Minnesota* were so at variance with those obtained here that it seemed best to arrange them separately in the tables, particularly

*That the basis of opinion afforded by presence of types in actual practice in Minnesota is not different from that in other localities, is shown by the fact that the average duration of the quarantine period determined by the absence of diphtheria bacilli in two consecutive negative examinations is not greater in Minnesota than that in other localities.

as this report was intended primarily for the use of Massachusetts boards of health.

FREQUENCY OF THE OCCURRENCE OF WESBROOK'S TYPES OF BACILLI IN HEALTHY PERSONS, AND A CONSIDERATION OF THE EVIDENCE FOR THEIR RELATION TO DIPHTHERIA BACILLI.

GRANULAR FORMS.—A, C, and D are the forms most commonly present in clinical diphtheria,* and would be classed as diphtheria bacilli by all bacteriologists. One or more of these three forms were present in the nose in .93 per cent of persons examined in the East, or, including Minnesota, in 2.07 per cent. In the throat they were present in .61 per cent, or 1.46 per cent with Minnesota. Of all persons examined in the East, 1.39 per cent had these forms present in either throat or nose or both, or 2.89 per cent, including Minnesota. The other granular forms, B, E, F, and G, were seldom found in the East. Their relation to diphtheria bacilli is not settled.

BARRED FORMS.—These are said to be the only forms present in some clinical cases; but this condition must be rare, since some of the committee have never met such a case. They are said to be frequently present in the eye, where they are called the xerosis bacillus. If present in the eye, they can very easily pass through the lachrymal duct to the nose.

SOLID FORMS.—The bacilli of this group have protoplasm, which stains uniformly, and shows neither granules nor bars. In group A², B², and C² the rods occur singly; while D², E², F², and G² appear to be in pairs, often resembling two triangular or cone-shaped bodies with their bases together. These forms are found very frequently in the nose, as will be seen by an examination of the tables. For example, D² was present in the nose in 16.7 per cent of persons in the East, and 21.8 per cent, including Minnesota.

The relation of these solid types to diphtheria bacilli is still unsettled. They are sometimes met with as variants in pure cultures of diphtheria bacilli. Westbrook and Gorham claim to have found them present alone in cases of clinical diphtheria. Both of these observers several times isolated solid forms in pure cultures from healthy persons, and proved them virulent to guinea pigs. Such a condition, however, must be very rare, as no other members of the committee have ever found these forms present alone in clinical diphtheria; and, when isolated by them from healthy persons, they have always proved to be non-virulent. Certain of the solid forms have characteristics which have been considered sufficient to differ-

* See also statistics of occurrence of A, C, D in clinical cases, Table XIII; also, Minnesota State Board of Health Report, 1899-1900.

entiate them from *B. diphtheriæ*. Thus, while the typical diphtheria bacillus has a very marked power of producing acid in dextrose bouillon, this property is entirely, or, at least, very often, absent in the most abundant solid forms, certainly those of the D² type. For this reason the solid forms are considered by many authorities not to be diphtheria bacilli at all, and are classed as pseudo-diphtheria bacilli or Hoffman's bacillus.

Others consider that these differences are not sufficient to separate them from true diphtheria bacilli. Thus Gorham believes that the changes in morphology are brought about by the action of the body fluids of an immune individual. Both he and Westbrook find a gradual change from the granular to the solid forms during convalescence from the disease.

What types should be regarded as diphtheria bacilli? The committee believes that the question of the relation of these types to clinical diphtheria requires more investigation. The following statements, however, seem justified from the available evidence.

The large granular types are the ones most commonly present in cases of clinical diphtheria. They are found in about 1 to 2 per cent of well persons in this vicinity. The solid forms are very seldom present alone in cases of diphtheria, while they were found in about 20 to 25 per cent of all healthy persons. It is evident, therefore, that the granular types are the most important ones in the causation of diphtheria.

Whatever the relation of the solid types to diphtheria, whether they be true diphtheria bacilli or not, it is very obvious that they can be of little diagnostic value, being present as they are in so large a percentage of all healthy persons. Any attempt to base isolation on the presence of such types would be an injustice. Certainly, no restrictions whatever should be put upon a healthy person unless there are present in his nose or throat the forms of bacilli morphologically identical with those commonly seen in cases of diphtheria. In healthy persons, therefore, usually only the granular types, A, C, and D, should be recognized as diphtheria bacilli. We believe that the persons in whom these three forms are present represent almost all the individuals who are capable of infecting others.

It seems probable, in view of the results obtained by such reliable observers as Westbrook and Gorham, that sometimes the solid forms, even when present alone, are true diphtheria bacilli; but we believe that this is so seldom the case that the number of persons who might be overlooked by neglecting these types would be very small.

The percentage of persons having the forms A, C, or D in the throat or nose is, as already stated, 1.39 per cent in the East, and 2.89 per cent, including Minnesota. These figures probably are not constant. Cultures from different classes of people would sometimes show different results. The results might be expected to vary in different years, depending in part on the prevalence of the disease of diphtheria and in part on factors as yet

unknown. It might be said that at the time these investigations were made (1901) diphtheria had been unusually prevalent. It seems reasonable, however, to suppose that in Massachusetts about 1 to 2 per cent of all persons carry typical diphtheria bacilli. Of this 1 to 2 per cent, not all are capable of transmitting the disease; for it is found that bacilli morphologically identical with diphtheria bacilli may have no power of producing toxins.

VIRULENCE OF THE DIPHTHERIA BACILLI FOUND IN HEALTHY PERSONS.

As there are differences of opinion in regard to the value of the guinea pig test for virulence, due in part to a misunderstanding of the nature of the test, a word in explanation of the method employed seems desirable.

The test is usually made by growing the diphtheria bacilli in bouillon. Soluble toxins are formed in the bouillon, if the bacilli are virulent; and this bouillon inoculated into guinea pigs produces local lesions and the death of the animal, even if all the bacilli have been removed by filtration. The test, therefore, is not to see if the bacilli produce toxins in the guinea pig, but whether they will produce them in the bouillon. If there are toxins in the bouillon, we know that they will produce the characteristic lesions in the guinea pig; for the effect of the diphtheria toxins on guinea pigs is so constant that this animal is taken as a standard of measure of the strength of diphtheria toxins and antitoxins. Practically, all diphtheria bacilli from clinical cases produce toxins in bouillon; and there is no reason to believe—although this cannot be proved—that the converse is not true, namely, that the bacilli which produce no toxins in bouillon will not produce them in human beings.

The number of virulence tests which were made in connection with these investigations was, unfortunately, small. More information on this point is needed.

Thirty-eight cultures of the solid forms were tested. In thirty-five the results were negative, while three showed virulence. The three positive tests were obtained by Gorham, reference to whose results has already been made.

One test of the barred forms was made. The result was negative.

Forty-seven tests of the granular forms were made. Thirty-nine proved to be non-virulent, eight (about 17 per cent) were virulent.

While these investigations show that about 1 to 2 per cent of all persons have typical Klebs-Loeffler bacilli, only about 17 per cent of this 1 to 2 per cent have virulent bacilli, or, in other words, 17 in 5,000 to 10,000 of all persons have diphtheria bacilli which are dangerous to the public health. The number of virulence tests was too small to make the above percentages of much value, yet they bring out the fact that, if a healthy

person is found to have Klebs-Loeffler bacilli, and there is no connection traceable between that person and cases of diphtheria, the chances are very much in favor of the bacilli being non-virulent. Great care should therefore be taken, we believe, not to put unnecessary restrictions on persons where the chances are great that the bacilli are non-virulent.

DIPHTHERIA BACILLI IN PERSONS EXPOSED TO THE DISEASE.

The investigations of the committee, except as already noted, do not cover the frequency of occurrence of diphtheria bacilli in exposed persons, but observations on this point are obtainable. Thus Park* found 50 per cent of children exposed in New York tenements to have Klebs-Loeffler bacilli. Chapin,† in Providence, finds 16 per cent of exposed persons to have the bacilli; Denny,‡ in Brookline, 13 per cent; Kober,§ in Breslau, 8 per cent.

It is found also that the bacilli in persons who have been in close contact with diphtheria are usually virulent. Thus Park in six cultures from exposed persons, Kober in fifteen, and Denny in seven, found all to be virulent.

From the above it is evident that the problem of what to do with a person who has been exposed to diphtheria is very different from what it is in the case of a non-exposed individual.

The bacilli found in healthy exposed persons are probably of the same virulence as those in the diseased individual, the absence of symptoms in the former being the result of an acquired or artificially produced immunity. A healthy person who has Klebs-Loeffler bacilli as a result of recent exposure is therefore as dangerous as a convalescent from diphtheria in whom the bacilli are persisting after all the local symptoms have disappeared.

It is therefore theoretically rational, if convalescents are isolated, to isolate also all healthy infected persons who have been exposed, until they are free from bacilli. Such a course would undoubtedly result in preventing the occurrence of some cases and in saving some lives. It is found, however, that such a course is not practicable for all boards of health to follow. It is largely an economic question. The risk to the public health must be weighed against the loss and privation to the individual from isolation.

(Signed)

CHARLES V. CHAPIN,

*Superintendent of Health, Providence, R. I., Chairman
of the Committee.*

* American Text-book Practical Medicine, vol. i. p. 647.

† Reports of Superintendent of Health, Providence, R. I.

‡ Board of Health Report of Brookline, Mass., 1900.

§ Kober, Zeitschrift f. Hygiene, 1899, Bd. xxxi.

- HIBBERT WINSLOW HILL,
*Bacteriologist, Boston (Mass.) Board of Health, Secretary
of the Committee.*
- SAMUEL W. ABBOTT,
Secretary, Massachusetts State Board of Health.
- F. H. BAKER,
Bacteriologist, Worcester (Mass.) Board of Health.
- FRANCIS P. DENNY,
*Bacteriologist, Brookline (Mass.) Board of Health; Assist-
ant in Bacteriology, Harvard University.*
- FREDERIC P. GORHAM,
*Bacteriologist, Providence (R. I.) Board of Health; Asso-
ciate Professor of Biology, Brown University.*
- WILLIAM H. GOVE,
Salem (Mass.) Board of Health.
- ARTHUR HUDSON,
Bacteriologist, Newton (Mass.) Board of Health.
- THOMAS B. SHEA,
Chief Medical Inspector, Boston (Mass.) Board of Health.
- THEOBALD SMITH,
*Bacteriologist, Massachusetts State Board of Health; Pro-
fessor of Comparative Pathology, Harvard University.*
- F. F. WESBROOK,
*Bacteriologist, Minnesota State Board of Health; Pro-
fessor of Pathology and Bacteriology, University of
Minnesota.*

(Dr. Wesbrook modifies his assent as follows: for Conclusion II he would substitute, "It may sometimes be impracticable to isolate from the public all the well persons in infected families, schools, and institutions, though it should be done as a routine if at all possible." He also adds, "Sometimes it is necessary to isolate, at least temporarily, patients who have sore throats in which types of bacilli not represented by A, C, and D are present.")

DIPHTHERIA FROM A BACTERIOLOGICAL POINT OF VIEW.*

BY IRVING A. WATSON, A. M., M. D.

It is a fact that the termination of a case of diphtheria cannot be prognosticated by the character of the bacilli; that the disease may be of the mildest or the most virulent type; that the bacilli may be present in the throats of healthy persons without doing them harm; that while the microscope may differentiate certain forms of the Klebs-Loeffler bacilli, experimental inoculations only can determine their virulence; that virulent bacilli sometimes produce only the mildest type of diphtheria; that a case clinically appearing to be diphtheria may be due to some other form of infection.

Strassburger, of Bonn, Germany, agrees with other observers that cultures from each case of diphtheria have a distinct toxin-producing power, and that this remains constant, even after a long period of time. In investigating an epidemic in his own city in which the fatality was unusually light, he isolated in pure cultures the bacilli from forty-seven cases, and in forty-three of the number he established the virulence of the bacilli by inoculative experiments. He also found that there was no special relation of virulence to the severity of clinical symptoms, and his conclusions were that the mildness of the epidemic had no relation to the virulence of the bacteria found, that it must be sought for in other causes.

Ernst says: "All of these investigations point to the same final conclusions: that the bacilli of diphtheria, even in the mildest cases, and without any clinical symptoms and also outside of the body, have a definitely stable virulence, and provided they fall upon suitable soil, are capable of setting up the so-called diphtheritic process, which is modified only by the physical condition of the person's organism so attacked."

In a tangle of seeming incongruities these writers, and others, have apparently lost sight of the actual value of the laboratory in differentiating the particular infection in clinical diphtheria.

Rupp,† in discussing these various phases in an ably written paper, throws perhaps unintentional discredit upon laboratory work in stating that "The routine bacteriological examinations as practiced at the present time in this city (New York) do not seem to be a help in the diagnosis of clinical diphtherias, nor do they help to prevent the spread of contagion."

Such an observation may lead some to believe that bacteriological examinations are next to worthless in themselves, and that the health department does not take notice of reported cases of diphtheria—an inference which we cannot believe was intended, but, nevertheless, the discredit thrown upon bacteriological work will be protested against both by clinicians and bacteriologists.

* Read before the New Hampshire Medical Society, May 16, 1902.

† Medical Record, November 9, 1901.

Whenever a bacteriological examination reveals the Klebs-Loeffler bacilli, the physician then knows positively that he has in hand a case of diphtheria, after which it becomes his duty to treat it as such, and to take no chances by waiting to ascertain through perhaps sad clinical experience the virulence of the bacilli. The health officer also is positively informed of the true nature of the disease, and he should take, immediately, the necessary precautions to prevent the spread of the malady.

The laboratory would have accomplished a function to its everlasting credit if it had done nothing more than to bring this early positive information to the physician and the health officer, however mild or virulent the case might be.

In discussing the subject of bacteriological diagnosis, Park says,* in speaking of the mild cases which it is difficult to differentiate, that bacteriological cultures "are of the utmost value, since they enable us to isolate those in which the bacilli are found, and to give preventative injections of antitoxin both to the sick and those in contact with them, if this has not already been done. As a rule, cultures do not give us as much information as to the gravity of the case as the clinical appearance, for by the end of twenty-four to forty-eight hours the extent of the disease is usually easy of determination."

The Bulletin of the Delaware Bacteriological and Pathological Laboratory, in discussing the importance of bacteriological examinations with respect to making positive diagnosis in suspected cases of diphtheria, says: "The value of such examinations is incalculable. If the physician sends to the laboratory a cotton swab which has been rubbed over the membrane or inflamed portion of the throat, the laboratory may or may not prove the presence of true diphtheria. If the result is positive the case is one of diphtheria, and is at once to be treated with antitoxin and isolated to prevent infection of others. If, on the other hand, the case is negative, the antitoxin treatment would be useless. Thus the physician knows exactly what to do, and works with a scientific certainty.

"Again, it has been found that certain forms of mild sore throat, which few physicians would easily recognize as diphtheria, are often associated with the presence of diphtheria germs. The true nature of such cases needs to be recognized, and the laboratory alone can settle the question."

Fussell, in discussing the value of throat cultures in diphtheria, says† that it would seem to follow that Klebs-Loeffler bacillus must always be found in a culture made from diphtheria, and conversely, in membranous exudates which are not true diphtheria, Klebs-Loeffler bacillus should

*Note: Bacteriology in Medicine and Surgery, page 377.

†Journal of the American Medical Association, November 16, 1901.

never be found, and that this proposition is true in a vast majority of cases; but not always so. Even in a case of true diphtheria the bacillus may not grow in the culture made, and, secondly, that sometimes a bacillus that is extremely like that of true diphtheria, if not so, is found.

Another condition which he says he believes discredits, to a certain extent, the results of a bacteriological examination is to be found in those cases in which there are no classical, clinical signs of diphtheria, but in which true, active, virulent diphtheria bacilli are found, and that this class of cases is large.

Jacobi recognized this when he said: "There are more cases of diphtheria walking our streets than are confined to the houses." While this assertion may, perhaps, be overdrawn, it illustrates the fact that he recognized walking cases of diphtheria as not at all uncommon.

Osler says:* "The presence of Klebs-Loeffler bacillus is regarded by bacteriologists as the sole criterion of true diphtheria, and as this organism may be associated with all grades of throat affections, from a simple catarrh to a sloughing, gangrenous process, it is evident that in many instances there will be a striking discrepancy between the clinical and the bacteriological diagnoses. One inestimable value of the recent studies has been the determination of the diphtheritic character of many milder forms of tonsilitis and pharyngitis."

Still further considering the diagnosis of diphtheria, he says:

"Where a bacteriological examination cannot be made, the practitioner must regard as suspicious all forms of throat affections in children, and carry out measures of isolation and disinfection. In this way alone can serious errors be avoided. It is not, of course, in the severer forms of membranous angina that mistake is likely to occur, but in the various lighter forms, many of which are in reality due to the Klebs-Loeffler bacillus."

Haven, in writing on the prevention of disease,† in reviewing diphtheria in its various phases, says: "It is impossible, too, to deal with diphtheria as it should be dealt with without the aid of bacteriology. This comparatively recent aid to diagnosis and control of the infective period, is, however, comparatively little used; yet it is only since we have had its assistance that we have been able to definitely decide that many cases of apparently simple sore throat are really diphtheria, and to recognize the infective nature of nasal cases without symptoms. The importance of being able to detect and deal with these ambulatory cases need hardly be pointed out, nor need the advantage of knowing when infection ceases; to these ends bacteriology is absolutely essential."

*The Principles and Practice of Medicine, Fourth Edition.

† Public Health (London), March, 1902.

OTHER INFECTIONS SIMULATING DIPHTHERIA.

It has been demonstrated by repeated bacteriological examinations, under conditions that insured the accuracy of the investigations, that many mild cases and some fatal ones having clinically the appearance, symptoms, etc., of diphtheria do not reveal the existence of the bacillus of diphtheria, but are due to some other form of infection. Cases appearing to be malignant diphtheria, terminating fatally, may result without the presence of the bacillus of diphtheria, the infection being due to some of the pyogenic cocci.

The streptococcus pyogenes is not only responsible for erysipelas, acute abscesses, septicæmia, puerperal fever, and many suppurative inflammations located in any or all parts of the human system, but it is, either alone or in conjunction with staphylococci, pneumococci, and perhaps other cocci and bacteria, the cause of many of the anginas, to determine which, or to exclude the bacillus of diphtheria, the bacteriological examination is imperative.

In the form of infection just referred to, the throat may present the false membrane, the systemic poison, the fetor of septic diphtheria, and yet the cause may be wholly free from diphtheritic infection.

The clinical symptoms of diphtheria which so frequently appear in scarlet fever, are almost always pseudo-membranous inflammations, resulting from the presence of streptococci. In fact we are safe in asserting, with our present knowledge of the subject, which has been obtained by long-continued and careful research by some of the ablest observers in this and other countries, that a certain diagnosis in the anginas cannot be made independently of the bacteriological determination of the form of infection.

Sternberg says:* "In certain forms of diphtheria, and especially when it occurs as a complication of scarlet fever, measles, and other diseases, the Klebs-Loeffler bacillus is absent, and a streptococcus, which appears to be identical with the streptococcus pyogenes, is found in considerable numbers, and is probably the cause of the diphtheritic inflammation."

In pelvic disturbances resulting in inflammatory or suppurative processes, gynecologists who avail themselves of the most recent advancement in treating this class of diseases, make use of bacteriological investigations to determine whether the infection is from gonococcus, staphylococcus, bacillus tuberculosis, colon bacillus, streptococcus, etc., for the purpose of guidance in the most efficient means of treatment.†

Equally important, if not, in fact, much more important, is it to determine the form of infection in the anginas for remedial purposes, to say nothing of limiting the infection of the disease.

* Text-Book of Bacteriology, Second Edition, page 225.

† Allaben. The American Gynecological and Obstetrical Journal, November, 1901.

NEGATIVE CULTURES.

In referring to this subject an eminent authority* already quoted says that "the reported absence of bacilli in a culture must be given weight in proportion to the skill with which the culture was made, the suitability of the media, and the knowledge and experience of the one who examines it." He ought also to have added that the manner in which the swab is used to entrap the bacilli is an equally important matter. Continuing, he says:

"Diphtheria does not occur without the presence of the diphtheria bacilli; but there have been many cases of diphtheria in which, for one or another reason, no bacilli were found in the cultures by the examiner. In many of these cases later cultures revealed them.

"In a convalescent case the absence of bacilli in any one culture indicates that there are certainly not many bacilli left in the throat. Only repeated cultures can prove their total absence."

In discussing the subject of diphtheria Ernst says:† "The study of virulence has been made by a number of observers, and it was easily noted that even in acute cases the virulence differed in a marked degree, and it was further observed that absence of diphtheria bacilli in one culture did not suffice to prove that the bacilli might not be found, and be found virulent, in a later culture."

Dr. H. W. Hill, director of the Boston bacteriological laboratory, in 1899 reported about four per cent of cases as negative on the first examination and positive on the second, and in commenting on this says that "a single negative result, and even occasionally two successive negative results, may be obtained from a case in which bacilli, nevertheless, are finally found."

Dr. George Blumer, director of the Bureau of Bacteriology and Pathology, New York, says:‡ "Do not rely on single samples of tuberculosis or diphtheria matter, but send others at intervals of a few days."

The number of bacilli in a very mild case of diphtheria, or at the first onset of the disease, in the throat of patients after all clinical symptoms of the disease have disappeared, or in a healthy infected throat, must necessarily be infinitely less than during the course of the disease, and they may be practically hidden in the folds, or follicles, of the mucous membrane, and for this reason negative cultures may be obtained primarily, or intervene between positive cultures.

* Park.

† Twenty-sixth Annual Report of the Health Department of the City of Boston, 1897, page 68.

‡ Medical Review of Reviews, November 2, 1901, page 1016.

EXAMINATIONS FOR RELEASE OF QUARANTINE.

It is important for the patient, the family, and the health officer to know just when a case of diphtheria may without danger be released from quarantine.

It has been the custom in the past to fix an arbitrary period of from four to six weeks for the maintenance of quarantine, the maximum varying somewhat with the severity of the disease. This method is unscientific, and in its place should be substituted, as far as practicable, the culture method of determining when a case may be released.

The question of the virulence of the bacilli found in the throats of persons during convalescence, or immediately after recovery, is of considerable importance. In 1897, under the direction of Dr. Ernst,* culture tests were made in twenty-four cases that had been reported as positive for three weeks or more, and for which cases release was asked on the ground that the clinical symptoms had completely subsided. Inoculation experiments were made with guinea pigs, resulting in over 67 per cent of fatal cases, while others showed marked constitutional disturbances, and some of the animals were so sick that death was expected daily. A most virulent type of the disease was manifested in all but two of the cases.

Dr. W. H. Park, of New York, in a study of 605 cases to note the appearance of bacilli after the disappearance of clinical symptoms, says that in three or four cases they disappeared in three days; in 176 they persisted seven days; in 65, twelve days; in 36, fifteen days; in 12 cases, three weeks; and in 4 cases, five weeks.

Fowler and Wilson, in a circular of the New York board of health, 1896, stated that it was their observation that from the beginning of the disease, 30 per cent of the cases last three weeks or more; 15 per cent, four weeks or more.

Dr. Ernst found that of 909 diphtheria cases, but twenty-three patients were kept in quarantine over four weeks.

Additional statistics might be cited to prove the correctness of this position, but it would seem to be unnecessary.

INTERPRETATION OF RESULTS.

If a culture from the throat of a patient who appears, clinically, to have diphtheria, reveals the Klebs-Loeffler bacillus, there can be no question as to the diagnosis; but should the culture prove negative, instead of positive, the physician should in every instance regard the result as valueless, and should not permit it to warp his judgment or treatment of the case from a clinical point of view. The physician who relies upon a pri-

* Twenty-sixth Annual Report of the Health Department of the City of Boston, 1897, page 63.

mary negative result for a diagnosis of his case, may find himself in serious trouble, with, perhaps, a most malignant type of diphtheria on his hands a few days later.

We desire to impress this upon the profession, inasmuch as the experience at the New Hampshire Laboratory of Hygiene, covering over a thousand examinations in suspected cases of diphtheria within a year, shows that in a large percentage of those in which the primary examinations resulted negatively, a second culture was not taken, the physician evidently relying upon the first result, and believing it to be a sufficient guide. Or, if his case proved unfortunate, he charged it to the laboratory.

We believe that negative results should not be relied upon in any case of angina short of two or three examinations, made on successive days, and the culture taken in accordance with the directions issued, in order to prevent the specimen from being vitiated by the use of disinfectants immediately before it is taken, and that the operation may be properly performed.

Time does not permit a discussion of the morphology of certain bacteria associated with the various anginas, or the consideration of some other points in connection with the etiology of the various affections which closely simulate diphtheria; but we offer in conclusion the following propositions, as substantiated by clinical experience and bacteriological investigations:

1. That true diphtheria cannot exist without the presence of the Klebs-Loeffler bacillus, and that no case can be absolutely diagnosed as diphtheria until this bacillus has been demonstrated.

2. That membranous anginas of sufficient severity to cause death may be produced by the streptococcus pyogenes, the micrococcus of sputum septicæmia, and perhaps by other varieties of bacteria.

3. That without a bacteriological examination, the form of infection cannot be determined, or, in other words, the clinical appearance of a case does not always, if ever, reveal its true character, although presumably the clinical diagnosis is correct in a majority of cases.

4. That a bacteriological examination should be made in all cases when practicable, and that negative results should not be taken into account unless at least two or three are obtained on successive days.

5. That all cases having the clinical appearance of diphtheria should be treated as such from the beginning and until contra-indicated by successive negative examinations. It is, of course understood that one positive result is conclusive for diagnostic purposes.

6. *That anginas not dependent upon the Klebs-Loeffler bacillus do

*This proposition was intended to be general in its application when written, but the writer would amend it by adding: *But following all fatal anginas disinfection should be thoroughly performed.*

not require the establishment of a quarantine, or the attention of the health officer.

7. That bacteriological examinations for release from quarantine would insure better public protection against this disease, would shorten the average period of isolation, and materially lessen the expenses in a great majority of cases.

8. That while laboratory examinations do not furnish an inflexible or infallible guide to the physician, they are a great aid to him in arriving at a correct conclusion in the case; in furnishing grounds upon which to make more positive assurances to the family; in strengthening his convictions as to the best line of treatment; in showing the health officer the necessity or non-necessity for isolation; in indicating when cases may be released from quarantine, and, in fact, in placing the entire management of the disease upon a more scientific basis.

THE BACTERIOLOGY OF OUR MOST COMMON DISEASES.*

BY PROF. H. N. KINGSFORD, M. D., BACTERIOLOGIST STATE LABORATORY
OF HYGIENE, DARTMOUTH MEDICAL COLLEGE, HANOVER, N. H.

The object of this paper is to emphasize that knowledge which is essential to a rational prophylaxis against the spread of the infectious diseases which most commonly come under our care, such, for instance, as that relating to the agents concerned in their causation; when and where such agents are to be sought for; the manner in which they are expelled from the diseased and received by the healthy body, and the steps to be taken to prevent their spread. It will be impossible in the time allowed to more than briefly go over some of the most important points in connection with these diseases. We will consider the diseases: Typhoid Fever, Scarlet Fever, Diphtheria, and Tuberculosis.

1. TYPHOID FEVER.

CAUSES.—The *Bacillus typhosus* is a short, actively motile, flagellated, non-spore-forming, non-liquefying rod, varies much in length and has rounded ends. It grows at ordinary temperature, but best in the incubator at 37° C. It is destroyed in ten minutes by a temperature of 60° C. It is not destroyed by freezing. When inoculated into animals the results are very irregular. By none of the ordinary methods of inoculation are conditions produced in animals that are in any way, either clinically or pathologically, comparable to those found in the human being suffering with typhoid fever. This disease is in all probability confined exclusively to man.

MODE OF DISSEMINATION.—The specific micro-organism causing the disease is contained in the discharges from the bowels of typhoid patients, and is generally present in the urine also, and it is manifest that all substances with which these substances come in contact may become specifically contaminated and be capable of conveying the disease. Typhoid fever is disseminated in a variety of ways, but most frequently through the water, the soil, and through green vegetables, salads, etc., that are eaten raw and that have been fertilized by human manure. It is not infrequently disseminated by milk which has become infected as a result of the use in the dairy of water polluted with typhoid evacuations. Attention has been recently directed to raw oysters as a possible dissemination of this disease. The refuse of food that has been used by typhoid patients should be looked upon with suspicion, and should under no conditions be

* Read at the School of Instruction for Health Officers and Sanitary Conference, 1902.

eaten by those in attendance. There is no evidence that the disease is disseminated through the air. Milk and other foods may be infected by insects that have been in contact with fresh typhoid stools, and thus become the means for conveyance of infection. Typhoid infection of a water supply, which is the most common channel of infection, may be direct or indirect. Direct infection occurs through the entrance of ordinary sewage containing the essential organism, or of fæces or urine discharged along the banks of a river or lake by persons suffering with or convalescent from the disease. Indirect infection occurs from discharges deposited in or upon the soil and thence washed by rain into bodies of water, or downwards into wells. Ordinary sewage pollution is not sufficient to bring about an outbreak of the disease, nor will specific pollution necessarily always be followed by the occurrence of cases. The specific organism has only a limited tenure of life and, in the absence of conditions favorable to its existence, it may perish before it reaches the consumer. Moreover the number of organisms present may be very small and the effects produced so slight as to occasion no great notice. It is to be borne in mind that not every mouthful of a polluted water supply contains the organisms, and that not every person into whose system it gains access must necessarily come down with the disease. Until quite recently it has been supposed that the infecting organisms had their origin only in the fæces of pre-existing cases, but it is now known that this is far from being the case, and that they exist in the fæcal discharge only during the early stages of the disease, or up to the twentieth day, or perhaps even somewhat later. Petruschky has shown that the urine may contain millions of living bacilli in each cubic centimetre and that they may appear for many weeks and even after convalescence is well established. They may appear as early as the fifteenth day, when perhaps they are no longer demonstrable in the fæces. Dr. M. W. Richardson found them in very large numbers and in practically pure culture in the urine of nine out of thirty-eight patients. They appeared late in the course of the disease and continued to be eliminated in several of the cases after discharge from the hospital. It appears then that an apparently well person is capable of infecting a water supply to a greater extent and with less optical evidence, or none at all, by a discharge of urine into a water-course than an evidently sick one by a deposit of his fæces into it or upon its banks. Whatever the mode of infection of a public water supply, the results, if any, are seen in an increase in the number of cases ordinarily occurring in the community supplied, and, except in those instances when the disease is spread by shell-fish or other foods, any considerable augmentation of cases points unmistakably to the consumption of polluted water even though the system of filtration is followed. In the latter instance, investigation will almost

always certainly show some defect in the filters; or that their capacity has been overtaxed. Even after the subsidence of the outbreak, the disease may continue to be more prevalent than usual for some little time, especially in the absence of a proper system of sewerage.

PORTAL OF INFECTION.—The disease is not contagious but infectious. It is not spread by breathing the same atmosphere with the typhoid patient. Infection occurs by way of the alimentary tract; that is, it results from actually swallowing materials that have come directly or indirectly from the bowels of an individual affected with the disease. We have no evidence that it occurs in any other way.

PROPHYLAXIS.—It is now generally recognized that the most potent factors in diminishing the widespread occurrence of this disease in communities are an unpolluted general water supply and a reliable system of sewage disposal. The conspicuous decline in the mortality from typhoid fever that has followed the adoption of such measures in many of the larger cities and towns can leave little room for doubt as to the correctness of this view. In districts where the water supplies are obtained from shallow wells there is probably no more active cause of the spread of this disease than the pollution of the soil by cesspools and privies. In such localities the soil is often saturated with the contents of privies into which not only normal intestinal contents find their way, but also the evacuations of individuals suffering from the malady. It is therefore plain that the most important domestic prophylactic measures consist in the disinfection of the bowel-discharges from all suspicious cases of intestinal trouble, and the subsequent disposal of such discharge by some method that will remove them quickly and completely from the neighborhood of human habitation. This latter is to be accomplished in cities only by means of an efficient sewage system. In the country, where sewers do not exist, reliance must be placed in the disinfection of the stools and their final disposal upon the soil. A good method of disinfecting stools and urine is to mix with each specimen double its volume of freshly prepared milk of lime, or double its volume of 1 per cent chloride of lime solution, or double its volume of 5 per cent carbolic solution, or pour upon the specimen three times its volume of boiling water. In either case cover the vessel and allow it to stand in a safe place for from one to two hours before it is emptied. This point cannot be too strenuously urged, as the stools and urine of typhoid patients are the only known source of the disease, and, as they are easily rendered inert, a good deal may be done in reducing the frequency of this disease by careful attention to this point. This disease occurs in all countries, perhaps more frequently in temperate than in countries presenting the extremes of atmospheric heat and cold. It is a disease

of late summer and early autumn, the greatest number of cases usually occurring between the latter part of July and the early part of October. Men are somewhat more frequently affected than women. It is a disease of early adult life. Though endemic in all countries, it often occurs in epidemics. A great deal of valuable information can be had by studying some of the large epidemics, as, the Lansen in Switzerland, the Plymouth, Pa., epidemic, 1885, the Philadelphia epidemic, 1898, and others.

2. DIPHTHERIA.

CAUSE.—Diphtheria results from the pathogenic activity of the *Bacillus diphtheriæ*, or the Klebs-Loeffler bacillus. Diphtheria is an infectious disease which is also generally regarded as contagious. Klebs-Loeffler is a non-motile, non-liquefying, non-spore-bearing organism, and is conspicuous for the irregularity of its morphology. It grows rapidly on most of the ordinary culture media when kept at the body temperature. It is not readily destroyed by drying and when dried it has been known to retain its vitality for fourteen weeks. It is readily destroyed by both heat and chemical means. Its thermal death point at 58° C. is ten minutes. It is destroyed in cultures by the direct action of sunlight in from 35 to 40 minutes. In human diphtheria and in the experimental form, the specific organism is usually found only at the local site of disease. It is to the action of these poisons that the symptoms seen in diphtheria are due. The disease has been known since the time of Galen. It has been observed in practically all countries. The disease is more common in cold and temperate than in hot climates. It prevails much more extensively during the autumn and early winter than at other seasons. It is endemic in cities; it frequently appears in an unusually severe epidemic form in country districts. It occurs at all ages; the greatest number of cases fall between the third and the sixteenth years.

MODES OF DISSEMINATION.—Though contagious, it is nevertheless probable that the disease is never contracted by simply breathing the air of rooms occupied by diphtheritic patients, for the reason that the specific micro-organism is not contained in the breath of the patient, and is not eliminated in that way. It is, however, dislodged during coughing, sneezing, gagging, along with minute particles of false membrane from the throat. Nurses and physicians are especially liable to have bits of membrane coughed into their faces during the usual manipulations about the throat of the patient. It is accidents of this kind that make the duties of attendants on diphtheria patients particularly dangerous, and it is among such attendants that instances of direct infection occurring in this way are frequently observed. It is also to be noted that the bacillus of diph-

theria is not readily destroyed by drying, and that when dislodged from the throat in bits of false membrane it may retain its vitality for a long time. When such particles of dried membrane are disintegrated, dissemination may occur through the breathing of air laden with this infective dust. Napkins, cloths, towels, handkerchiefs, etc., etc., on which saliva from the patient has been allowed to dry, may serve in this way to spread infection. Through inattention of the hands, soiled while working about the patient, the disease may readily be spread. In short, all modes of immediate contact with the diseased person offer opportunities for infection. There is a pretty widespread belief that domestic animals are instrumental in spreading the disease. These views are probably erroneous. It must be said, however, that cats are reported to have suffered from diphtheria contracted from human beings. A number of epidemic outbreaks of the disease have been traced to the milk supply of those affected. This has given rise to the supposition that the cattle from which the milk was obtained were diphtheritic. There is no trustworthy evidence that cattle ever suffer spontaneously from a disease capable of transmitting diphtheria to man. When "milk epidemics" do occur, they are probably in all cases due to contamination of the milk with the genuine diphtheritic virus from human sources, from the family, or the dairyman, or from some of the others through whose hands it passes before reaching the consumers. There is no evidence to support the opinion that the disease is disseminated by the water. Neither is there any evidence that the disease is spread by the air of drains and sewers. Where, through defective plumbing, there is a direct passage of the infective materials thrown into closets and sinks through leaks in the soil-pipes, it is manifest that the disease may be spread by such materials finding their way into other parts of the building and not into the sewers as intended. All statistics show that those constantly engaged about sewers are not more liable to infective diseases than others.

PORTALS OF INFECTION.—For faucial diphtheria the portals of infection are the nose and mouth. Diphtheric inflammations, etiologically identical with diphtheria, are occasionally observed in other localities, namely, on other exposed mucous surfaces, as conjunctiva, vagina, and upon wounds of the skin that have become infected with the specific diphtheria virus. During the course of the disease in the throat, self infection of wounds on exposed surfaces of the body are not rare. Infection of the nasal mucous membrane often results in a more or less chronic process, although the acute manifestation of the disease is likewise observed in this locality.

PROPHYLAXIS.—The most modern, and certainly the most important, prophylactic measure is that through which a condition of immunity from the disease is afforded by the subcutaneous injection of the blood-serum from an animal that has been artificially rendered highly immune from the poison of diphtheria. As the immunity thus induced is not permanent, lasting for but a few weeks at the most, this procedure is only employed when healthy persons are directly exposed to the disease, especially in the case of the well children of a family in which the disease is present. As the site of the infection is the local area of diphtheritic inflammation, it is plain that all objects in any way contaminated with matters from this area are infective and should be scalded as soon as removed from the patient. These patients should be provided with separate eating utensils, which should be scalded after each meal. The refuse from meals should be scalded with boiling water. Soiled bed and body clothing should be scalded before the secretions are permitted to dry upon them, or, when this is not practicable, the soiled areas should be moistened with 3 per cent carbolic acid, or 1 : 1,000 corrosive sublimate solution. Nurses and physicians should guard against infection by thoroughly washing and disinfecting the hands immediately after manipulating the patient. While spraying or otherwise attending to or examining the throat, a cotton mask, moistened with either of the named solutions, should be worn; this is to guard against infection that might otherwise result from bits of membrane being coughed into the mouth, nose, or face. These patients, when possible, should occupy a room in an unfrequented part of the house, and should be isolated; that is to say, only those in immediate attendance should have access to the room, and all articles that have been about the patient should be scalded or otherwise disinfected before they leave the sick room. From the standpoint of prophylaxis, it is important to note that the diphtheria bacilli do not, as a rule, disappear from the throat with the disappearance of the false membrane, but often persist far into the period of convalescence. In the experience of the laboratories of the different boards of health, it is found that the average period of persistency of diphtheria bacilli in the throats of convalescents from the disease is twenty-six days, reckoned from the date of establishment of the diagnosis by the primary bacteriological examination. In one case they were present after one hundred days, while in a few cases they have disappeared in seven days. Because of the persistence of the infective agent in the throat of these patients, convalescents from diphtheria are regarded as dangerous sources of infection until they are shown to be otherwise by bacteriological examination of the throat, and in no case should the quarantine be raised until the bacteriological report is negative.

3. TUBERCULOSIS.

DEFINITION AND CAUSE.—Tuberculosis is an infectious disease caused by the *Bacillus tuberculosis*, discovered by Koch in 1882. Opinions are somewhat at variance concerning the transmissibility of tuberculosis, particularly the pulmonary form; but the bulk of evidence favors the opinion that the disease is contracted through continuous respiration of the air of apartments occupied by tuberculous individuals. Not that the consumptive throws off with the breath, in the course of ordinary respiration, the specific bacillus of the disease, for this is not the case; but rather that by inattention to the proper prophylactic measures the sputum of such patients, which contains the living tubercle bacilli, is expectorated upon the floor, into napkins, or in undesirable places, becomes dried, ground into the dust, and in this form is inhaled by those in attendance upon the patient. When infection occurs, it is probably to be explained in this manner. The bacillus of tuberculosis is a slender, rod-shaped organism, usually presenting the appearance of being somewhat beaded. It is motionless. It cannot be readily cultivated in the ordinary nutrient media, though it can be induced to grow on sterilized blood-serum, and then only at the temperature of the body. It is destroyed by the temperature of boiling water in a few minutes, and by lower temperatures also, but after a longer time. It is not destroyed by either drying or freezing. In the dry state it is much more resistant to heat than in the moist.

GEOGRAPHICAL DISTRIBUTION, RACE, SEX, ETC.—The disease occurs in all countries, among all peoples, and at all ages. It is more frequent in over-crowded than in sparsely settled localities, and somewhat more common in low than in high altitudes. The American Indians and the negro races exhibit a marked susceptibility to the disease, as do offspring from commingling of the white and colored races. It is seen in many of the domestic animals, notably bovines. It is quite common in pigs, rare in sheep, dogs, and cats. Many of the wild animals, in which tuberculosis does not occur while they are in their native state, develop the disease after confinement, especially the monkey and woodchuck. It is of the greatest sanitary importance to note the fact that, among the domestic animals in which the disease occurs, bovines, especially milch cows, are most often affected.

MODE OF DISSEMINATION.—The part played by heredity in disseminating this disease is most conspicuously exhibited in the perpetuation of a particular condition of vitality that renders the individual endowed with it susceptible to this form of infection. The frequency of tuberculosis in the young of tuberculous parents cannot always be referred to the

congenital existence of the disease; in fact, authorities are pretty well at one in the opinion that this is rarely the case. It is more probably due to direct infection from parent to child through their very intimate association. It cannot be denied, however, that intra-uterine tuberculosis of the fetus is occasionally encountered. Every tuberculous individual is a source from which the disease may be further disseminated. This is conspicuously true with regard to those afflicted with the pulmonary manifestations. The sputum of consumptives contains the tubercle bacillus in enormous numbers. When such sputum is allowed to dry and become ground into dust and is inhaled by those in the vicinity we see, most probably, the commonest mode of dissemination of consumption. The greater frequency of the pulmonary over the other forms of the disease speaks in support of this view. With tuberculosis of the genito-urinary tract the bacilli are found in the urine, while from intestinal tuberculosis they are thrown off with the discharges from the bowels. From skin-tuberculosis, they escape with the secretions and with particles of skin. An important factor in the dissemination of tuberculosis is its occurrence in certain domestic animals, especially those used as food. Though there is still a controversy with regard to the danger of infection from the use of flesh and milk of tuberculous animals, it should be borne in mind that the tubercle bacillus is found in both, and, so long as this is the case, these substances must be considered as possible disseminating factors, if not rendered harmless by thorough cooking. In addition there are a multitude of ways in which dissemination may occur when consumptives are closely and continuously associated with healthy individuals, as in the case of man and wife, of parent and child, of patient and nurse, etc.

PORTALS OF INFECTION.—The commonest portals of infection in man are the lungs, the alimentary tract, and wounds of the skin. The disease may be produced experimentally in susceptible animals in a variety of ways. Contrary to the general rule for pathogenic bacteria, the tubercle bacillus apparently has the property of passing into a resistant condition, analogous to that of the spore-stage within the living body. When thrown off from the diseased body these resistant forms of the bacillus survive the unfavorable conditions that they encounter, such as drying, low temperature, scarcity or lack of nutritive material, and retain the power of producing tuberculosis, when conditions favorable to the exhibition of this function again present themselves. Investigations show that the tubercle bacillus, in full possession of its pathogenic powers, may often be found in the dust of rooms occupied by tuberculous patients. There is some question as to whether flesh and milk of cattle affected with the pulmonary form of tuberculosis contain the tubercle bacillus, but there is no question that, through the careless handling of such flesh and milk by butchers and

dairymen, both meat and milk may become accidentally infected, and, if used in the uncooked state, may serve as sources of infection. Tuberculosis as a result of direct inoculation, through wound of the skin, is less important to man than the preceding modes of infection. When it does occur, the process is usually localized to the site of infection.

PROPHYLAXIS.—The most important prophylactic measure is through disinfection of the sputum and other discharges from persons suffering from the disease. The patient should be impressed with the fact that he is a possible source of infection, and that it is quite within his power to control the spread of the disease from himself by attention to a few simple details that will in no way interfere with his comfort. If he is suffering from pulmonary consumption, the sputum should be spat into covered vessels containing plain water which is subsequently to be boiled. Cheap paper sputum-cups that can be burned after use are now to be had of all druggists. The cups to receive sputum, other than those of paper, should be of china or enamelled ware, and should be thoroughly scalded with boiling water at least twice daily. When the patient is away from his apartments and cannot use the sputum cup, he should be provided with cheap handkerchiefs or napkins, into which he should expectorate, which should be burned after using. A very good form of handkerchief for this purpose is the paper Japanese handkerchief. All clothing soiled with tuberculous sputum should be at once removed and scalded. The consumptive should be provided with his own eating utensils and these should be used by him alone. The refuse from his meals should be burned. The living and bed-room of the patient should be kept scrupulously clean and should be frequently aired. Under no circumstances should spitting about the room be permitted. Dusting should not be practiced, but when necessary all objects should be wiped with a cloth moistened in 1 : 1,000 corrosive sublimate solution. By thorough cooking tuberculous meat and milk are rendered free from danger. The slaughter of animals for public consumption should be under authorized inspection and control, and the entire carcasses of animals found to be tuberculous should be discarded and burned. Similarly dairy herds should be periodically inspected by qualified veterinarians and the sale of milk from all suspicious animals should be prohibited.

4. SCARLET FEVER.

DEFINITION, CAUSE, ETC.—An acute, specific fever, characterized by the occurrence of erythematous rash upon the skin, and accompanied by sore throat of varying degrees of severity. In the present state of knowledge it can only be said that the exciting cause of scarlet fever is as yet unknown, and that there have not been any suggestions upon this point

that have met with general acceptance. It is contagious, though less so than measles. It occurs both sporadically and as epidemic outbreaks. It is most common during the first ten years of life, though it is also seen in adults. It is not common in children under one year of age. It is a disease of autumn and winter and is known among peoples in all countries.

DISSEMINATION.—Scarlet fever is probably contagious at all periods, but it appears to be especially so during the stage of desquamation. The morbid agent, whatever it is, is very tenacious of life and pathogenic powers, and may cling to clothing, furniture, and the like for very long periods, retaining its power to reproduce the disease under favorable circumstances. Physicians, nurses, attendants, members of the family may carry the disease. Contagion may occur directly through the air of the sick room, and this is perhaps the commonest mode of transmission, especially when the air is laden with the fine dust-like particles of skin shed by the patient during the stage of desquamation. In the earliest stages it seems to be less contagious than later. There is no evidence that the disease is conveyed by water. There are a number of instances in which it has been carried by infected milk.

PROPHYLAXIS.—The patient should be isolated in a room as scantily and simply furnished as circumstances will permit. Because of the ease with which the disease may be carried, only the physician, nurse, or immediate attendant should have access to the room; and because of the tenacity of life possessed by the scarlatina virus, great care should be given to the disinfection of all articles before they are permitted to leave the room. The entire surface of the body of the patient should be kept oiled with some antiseptic ointment to prevent the escape of particles of skin into the air. These precautions should be observed until desquamation is complete. After removal of the patient the room should be carefully disinfected with formaldehyde gas.

5. MEASLES.

An acute febrile disorder characterized by the occurrence of coryza and an eruption upon the skin of small red papules. Measles is one of the most, if not the most, contagious of the acute exanthemata. Its cause has not yet been determined. It is a disease of the first five years of childhood, though it is also occasionally observed in adults. The rarity of measles in adults is probably to be explained through the fact that practically all children pass through the disease, and one attack usually protects against subsequent infection. It is endemic in all civilized countries and occasionally breaks out in epidemic form. It is a disease of late

autumn and early spring. It is directly communicable from the sick to the well. Vigorous efforts are rarely made to prevent the spread of measles. It is so eminently contagious that the usual efforts are considered of but little avail. The patient should be isolated and only the physician and nurse should have access to the sick room. After recovery the room and room furnishings should be thoroughly disinfected, aired, and cleaned, as after cases of scarlet fever.

SOME BACTERIOLOGICAL METHODS OF INTEREST TO
BOARDS OF HEALTH.*

BY ARTHUR K. DAY, M. D., BACTERIOLOGIST STATE LABORATORY OF
HYGIENE, CONCORD.

In connection with the establishment of a state laboratory of hygiene, it has seemed to me that a brief discussion of bacteriological methods, and of what may reasonably be expected of the bacteriologist, might interest a convention like the present one. I shall, therefore, try to give you a clear idea of how the work is done, and what dependence may be placed upon our results.

First, regarding diphtheria and other affections characterized by a deposit or membrane in the pharynx. For examinations in these cases, a culture upon artificial media is generally necessary before a definite opinion can be given. The culture outfit for use at the bedside is the sterile swab of cotton on a wire, inclosed in a test tube with its end plugged with cotton and covered by a rubber cap to prevent drying. This swab is rubbed thoroughly over the suspected area, returned to the test tube and sent, inclosed in its wooden case, to the laboratory by express.

I need not remind you that all disease germs are forbidden matter for the mails, so that practically the only materials that can come to us by that route are samples of blood for malaria or typhoid fever diagnosis.

When the outfit reaches the laboratory, the infected swab is rubbed thoroughly over the surface of the blood serum in the culture tube, and placed at once in the incubator, which is kept constantly at the temperature of the body. Twelve or fourteen hours at that temperature produce a good growth of the germ of diphtheria, while other germs grow more slowly. After that period, therefore, the growth, smeared upon a glass slide, dried, and properly stained, gives usually a definite picture, from which we can make our diagnosis. In 5 or 10 per cent of our cultures that are negative upon the first examination, a positive result is obtained from a second culture; so a single negative result should not influence the physician to change his diagnosis of diphtheria, when all symptoms point to the existence of the disease. The bacteriologist, with no knowledge whatever of a case clinically, should not be held responsible for the unfavorable ending, if a first examination does not reveal the bacillus of diphtheria. The laboratory of hygiene is not intended to take all responsibility from the shoulders of the attending physician, but acts as a consultant would act, in giving the benefit of bacteriological examinations.

* Read at the School of Instruction for Health Officers and Sanitary Conference, 1902.

Just a few words regarding "swab" examinations, so called; that is, immediate examinations of the material from the swabs, smeared upon a glass slide and stained, without the delay of growing upon culture media. A certain proportion of positive diagnosis can be made by this method; but the experience of the Boston city laboratory in a considerable number of examinations showed their ability to diagnose only about 60 per cent of cases that proved positive on subsequent culture. Therefore a negative result by this method is of no value whatever; and with the present arrangement at our laboratory, by which the express delivers all specimens received as late as 9 o'clock P. M., and the bacteriologist makes an evening visit at that hour, to see that all cultures are placed in the incubator, it seems to me that we get more satisfactory results.

The examinations are made by nine or ten o'clock the following morning, and can be reported by telephone or telegraph at once.

Next in frequency and quite as important are the examinations for the presence of the tubercle bacillus. The bacteriologist makes these directly from the material sent, whether sputum, urine, fæces, or other suspected matter. The germ of tuberculosis possesses the property of resisting the action of acids upon it when once it is stained by the aniline colors, and we take advantage of this property in making our diagnosis of the disease. The rods will appear perfectly distinct and brightly stained in the dried specimen, after an application of aniline dye, followed by weak acid which decolorizes everything else in the specimen. The decolorized portions take up readily a contrast stain, which renders all the more distinct the tubercle bacilli. Now in the case of microscopic examinations of sputa or other material suspected of containing the germs of tuberculosis, a negative result is to be viewed with even more skepticism than in the negative diphtheria culture, provided clinical symptoms persist and continue to arouse suspicion. Under such conditions, send repeated specimens from the same case until a succession of negatives or a positive result removes all doubt. For sending specimens in these cases the laboratory provides either the wide-mouthed glass vials, inclosed in a screw-cap wooden box, or the single wooden box coated inside with asphaltum or other impervious liquid to prevent the absorption of all moisture by the wood itself. A very small amount of sputa is sufficient,—what the patient would raise in coughing once or twice ordinarily.

For the diagnosis of typhoid fever we use the Widal test, or serum reaction, so called. This test depends upon the fact that the blood serum from a typhoid fever patient, or one who has had typhoid recently, causes a peculiar clumping of the germs of typhoid in a broth culture of the latter. This necessitates the sending to the laboratory of a few drops of blood from the patient, either dried upon a glass slide, or in the small glass tube

of our outfit for this purpose, hermetically sealed with sealing wax. The latter method supplies us with a little fluid blood serum from the patient, and is rather more satisfactory than the practice of sending a dried specimen of blood. This reaction is only demonstrable, as a rule, after the first week of the disease.

The examination of drinking water to determine the presence or absence of typhoid bacilli cannot be said to be perfectly satisfactory. True, the tests will show the germs if they are present in the specimen; but the amount examined is necessarily very small, and an undoubted source of the disease will generally fail to show a positive result. Bear in mind that a polluted stream will have two or three weeks to clear itself before the outbreak of typhoid from its pollution causes it to be suspected as the source of the disease; and the dilution of the infectious matter will be something enormous.

The recognition of the presence of the *Bacillus coli communis*, the most frequent habitant of human faecal matter, is much more common, and is the strongest of proof of the contamination of the water by intestinal discharges.

Diagnosis of these three infectious diseases (diphtheria, tuberculosis, and typhoid) forms the great mass of the work of a bacteriological laboratory. I will only add that malaria is capable of recognition by an examination of blood smears from a suspected case, which shows the presence of the causative organism (the plasmodium) in the red blood corpuscles. The outfit supplied by the laboratory for this purpose consists of several thin glass slides, inclosed in a small tin box. This may be sent by mail.

In closing this brief paper, I have only to thank you for your attention and to invite you all most cordially to make frequent use of the laboratory, as occasion may arise in the communities which you represent.

CONSTRUCTION OF VILLAGE SEWERS.*

BY ROBERT FLETCHER, PH. D., DIRECTOR THAYER SCHOOL OF CIVIL ENGINEERING AND MEMBER N. H. STATE BOARD OF HEALTH.

A generation ago the title of this discourse would have had but a faint interest for the average New Hampshire village. Dr. William T. Smith, in a paper read here three years ago, has well stated the general situation of that period as follows:

"Twenty years ago there was no sewer or public drain in the village except in one quarter where there were two covered stone drains. Sink water or other slops were distributed over the surface or collected in cess-pools. The old-fashioned back-house had no rival, and on the grounds of rich and poor bore its silent witness to the radical equality of mankind. The stone drains were ineffective and gathered filth. Of course we had typhoid fever every fall. All New England and, indeed, all the temperate zones did and still do have it. Sanitary science may eradicate it in the future; it has not yet done so."

He then showed how, in the village of Hanover, private enterprise alone took the situation in hand, and at a small cost, reckoned in hundreds of dollars only, drained and purified the soil and practically abolished typhoid fever, as to any origination in the village.

Today the increasing establishment of water supplies has compelled the construction of sewerage systems. Enlightened public sentiment and the better knowledge of sanitary laws, which our State Board of Health has done so much to promote, have almost removed the question of *necessity* of sewerage works from the region of debate.

But, unfortunately, there is not yet in some communities a sufficient appreciation of the true principles of construction of such works. It is a proverb that a man who tries to be his own lawyer has a fool for a client. As to some kinds of construction, however, too many individuals or communities think themselves quite competent to do their own engineering. Witness the money that is spent or wasted on badly designed water-works. Drain-pipe is now cheap; why cannot any level-headed man dig a ditch and lay the pipe himself, so as to carry off his house drainage, or the sub-soil water from his land? The average person says to himself, "Of course I can." But he usually finds sooner or later that experience and knowledge of principles govern even in such apparently simple undertakings, and that competent advice at first, even if it costs something, is cheaper in the end. The following papers in the Reports of the New Hampshire State Board of Health are appropriate to this subject:

* Read at the School of Instruction for Health Officers and Sanitary Conference, 1902.

"Homestead and Suburban Sewerage," by J. T. Fanning, C. E., in Report for 1883 (Vol. 3).

"Sewerage of Two New Hampshire Towns" (Keene and Laconia), by George E. Waring, in Report for 1891 (Vol. 10).

"Notes on the Sewerage of Rochester, N. H.," by E. W. Bowditch, Boston, in Report for 1895 (Vol. 14).

"Sewerage in Villages," by Dr. William T. Smith, in Report for 1897 (Vol. 15), p. 193.

These show in general terms what has been done and may be done in villages or towns to get effective sewer systems. The purpose of the speaker just now is to state a few simple but indispensable principles of construction, on which there must needs be ignorance, unless one has had opportunity to arrive at an understanding of them. Half knowledge on such points mars the full success of works of this character.

1. THE PROPER SYSTEM for a village of moderate size. This should usually be the *separate* system,—taking only house drainage. Storm water must be allowed to take its natural courses or be controlled by surface gutters and drains.

2. SIZE OF PIPE.—Much misconception on this point. The speaker has known of the use of 12-inch pipe for drainage of a small group of buildings. This is truly extravagant absurdity. A 6-inch pipe (glazed earthenware) on a slope of 1 to 100, $1\frac{1}{4}$ miles long, would serve 2,500 people, allowing 50 gallons per day for each, and then fill the pipe usually only half full. An 8-inch pipe on same grade, 2 miles long, would serve 5,000 people; or on a grade of 1 to 200, and $1\frac{1}{2}$ miles long, would serve 3,000 people. Too large a pipe does not work so well because the stream is always too shallow; to prevent deposits the depth of flow should be from quarter to half full at frequent intervals; this tends to keep the pipe clean. There is an example of an outlet pipe only 4 inches in diameter, laid across a low marsh with a fall of only 3 inches in 2,800 feet, and serving more than 20 houses, which has worked without stoppage for many years. At times it must work under a head of water, and of course all rubbish is excluded. However, a grade lower than 6 inches per 100 feet is not desirable, and 1 foot to 100 is ample for small pipe sewers.

3. ABSOLUTE UNIFORMITY OF GRADE is essential. The sewage must be kept moving with as nearly a uniform velocity as possible. Hence a careful survey must be made, and accurate preliminary plans, so as to establish the lines and grades for the entire system, to be operated as a whole. Independent and unrelated sewers and drains in a village are sure to cause extra trouble and expense in the end, when the inevitable time comes for providing for proper disposal at a single point if possible.

4. **TIGHT JOINTS.**—It is a fundamental error to lay pipe sewers with the intention of admitting ground water. The speaker knows that this has been common practice in the past, and is still being done in this state where those in charge have mistaken views on this question. Every joint should be cemented with cement mortar,—one part natural cement to one part of sand. Even so, when the utmost care is taken, joints will not be made tight under usual conditions of workmanship, and a very considerable amount of ground water will find entrance into the pipe. Open joints allow more or less sewage to escape and pollute the soil, and in times of heavy rains more or less sand and fine soil will be carried in from the soaked ditch, and sometimes, in clay soil, gradually clog or fill the pipe. The speaker has known of a cellar drain so laid which was completely choked in a few years, and of a long 8-inch pipe sewer which was so far choked as to be incapable of carrying off the discharge from a small motor. Again, if trees are anywhere near the line, the roots will quickly creep after the water and, if one rootlet gets in, the entire section of pipe will soon be filled with a clump of fine roots.

5. **STRAIGHT LINES AND MANHOLES.**—A proper lay-out requires all parts of the system to be straight. All changes of direction should be made at manholes. Then, if by any chance stoppage occurs, it can be located from the manholes and removed through them by aid of proper tools. Lamp-holes left between manholes allow a closer location of any clog which may occur. It is true that, under certain favorable conditions of grade, curves in pipe sewers have worked well. The speaker is familiar with one system of 8-inch pipe which is without manholes and has a great deal of curvature, and yet there has been no stoppage in about twelve years. The laying, however, was constantly supervised by a civil engineer, and the grade of 1 to 100 was carefully made in favorable hard ground which could be paved with a shovel. But experience proves that such practice should not be general, especially if every house connection is not properly put in by a competent authorized person, and all rubbish excluded from the main line by proper screens and traps.

Usually the simple manholes needed are not very costly. For ordinary depths, \$25 to \$30 will meet all the expense of one, including \$8 to \$10 for a suitably designed cast-iron cover.

6. **COST.**—The speaker is indebted to Mr. A. A. McKenzie, superintendent of buildings and civil engineer for Dartmouth College, for cost figures relating to some recent sewer construction:

A branch line consisting of 1,519 feet of 8-inch pipe, 612 feet of 6-inch pipe, and 226 feet of 5-inch house connections,—2,357 feet in all,—cost \$571, which is at the rate of 24½ cents per foot, completed. Another line of 806 feet of 8-inch pipe and 653 feet of 6-inch pipe cost \$341, or at the

rate of 23½ cents per foot. A main line of 2,437 feet of 8-inch pipe and 969 feet of 10-inch pipe, with seven manholes from 5 to 11½ feet deep, cost \$1,289, or at the rate of about 38 cents per foot. In Hanover a rental for each private connection is \$6 per year. At proportional rates for large and small services the total rentals (and equivalent rentals for college buildings) amount to an income of about 10 per cent on the total cost of the entire sewerage system. There is almost no expense for maintenance or repairs. The cost of surveys, mapping, and estimates is not included in the above, but it was probably not over 4 per cent in any case. Therefore the cost need not deter any progressive community, especially as such a system is always a valuable betterment to all the property served, and the universal experience is that a good sewerage system greatly diminishes the prevalence of typhoid fever, diarrhoeal diseases, and malaria.

7. FLUSHING.—Flush tanks are not usually needed excepting in a flat region where the grades are low. Generally sufficient flushing can be had by use of rain water turned in by roof leader-pipes from a few houses suitably located along the line. Some object to the offense of sewer air at the upper windows of such houses, but if there are no dormer windows, there is no danger, and no noticeable odor. In Hanover the practice has worked well, and there has been no complaint.

8. UNDERDRAINS.—In wet soil it is a common practice to lay a small tile drain, preferably alongside of the sewer pipe, at a little lower level, if practicable. It is very difficult to make the joints of such drains capable of admitting the ground water without at the same time allowing sand and dirt to enter also, and so eventually clog the drain. The so-called open joints should be wrapped with thick paper or old cloth. Excelsior not twisted or compacted is nearly useless. Then the entire joint should be surrounded with fine gravel, with a layer of sand next to that. Unless great care is taken more or less soil from the ditch will be carried off in the drain and the ditch will be giving trouble constantly by settling and causing holes or depressions in the street. In some hard soils a sewer ditch, even without an underdrain, will drain off gradually considerable subsoil water, and the adjacent soil is thus made drier.

9. DANGER OF FREEZING.—Very small indeed. Sewage, even in mid-winter, usually has a temperature of 45° to 50° and that keeps all the surrounding soil warm. An exposed outlet must be protected enough to keep the frost out, so that the free outflow may not be checked. Hence three feet of cover is sufficient. But a sewer line within village limits usually has to be much deeper in order to have proper grades for house-connections. As illustrating the effective heat in sewage we may refer to the experience with the sewage filter-beds at South Framingham, Mass.

"A filter-bed with an area of seven eighths of an acre received no sewage from September until January 9. On this date there were eighteen inches of frost in the bed and ten inches of snow upon it, the thermometer reaching 6° F. below zero. On January 9, 300,000 gallons of sewage were applied to the bed, and on January 10, 150,000 gallons. It is said that the effluent appeared in the underdrain in six hours after the application of the sewage. On January 11, the frost was, in places, out of the bed for its whole depth, and on January 12 it was nearly all gone, and the sewage had disappeared from the surface. Temperature of applied sewage 50° F." The case is far different with a water-main in northern New England. The water from a pond or reservoir, from just under the ice, starts along the pipe with a temperature very near 39° F. Hence a short contact with a frosty pipe will freeze it. Therefore every water pipe and hydrant valve must be put deep enough to be out of reach of frost. The fiction that running water does not freeze has little or no bearing on this question. The water in house-service pipes may be stagnant for hours at a time; it certainly is so in hydrant connections; and the motion in a street-main is slow, excepting for short periods of time.

10. CONDITIONS OF SUCCESS.—Careful planning by a competent engineer, and incessant supervision of the construction. Conscience must be a factor in the making of every pipe joint, so that there shall be no weak spots. Any slighting or slap-dash work will make a bad job surely, and may spoil it. Then there must be foresight to construct the system so as to be adapted to proper final disposal, even if it happens that that question may be postponed for the present. But disposal is a very large problem, which we are not now considering.

These are very commonplace and simple principles, but probably not familiar to many in the audience; and, whether so or not, will bear emphasis and reiteration, because they are vital to the success of these undertakings in small (or large) communities.

A SEPTIC TANK DESIGNED FOR A SMALL VILLAGE.*

BY E. H. HUNTER, C. E., CHIEF ASSISTANT TO DARTMOUTH COLLEGE
ENGINEER, HANOVER.

There is no doubt in the mind of any one, I think, that the time is not far distant when a sewage disposal plant will be a necessity in every well-regulated city and town, and will no longer be considered in the light of a luxury, as is the case to a considerable extent at the present day. Already the state legislatures are discussing, and in some cases have adopted, measures to protect the river cities and industries from the nuisance caused by the discharge of sewage into the streams. In many cities, as in the case of Albany, N. Y., the river water has become so polluted by sewage from the cities farther up the river that the water supply has been affected, and extensive filters have been installed to purify the water. This is starting at the wrong end of the problem; the sewage should be filtered or otherwise purified, and in this way leave the streams and rivers clean, ready to be used for a water supply at any point. As I said in the beginning, I think there is no question but that the general establishment of sewage disposal plants is a work laid out for the near future.

Although this is a comparatively new project, there are today a great many sewage disposal plants of various designs, most of them doing good work. It is not within the scope of this paper to enter into a lengthy discussion of the different kinds of filters and various schemes for the purification of sewage; I shall simply mention a few of the most important ones.

The most common and one of the most efficient is, perhaps, the sand filter. If land is of little value and sandy soil is near by, a sand filter can be built at very slight cost. These are being operated as continuous and intermittent filters, but have been found more efficient when working intermittently, although this generally requires the services of an attendant and considerable area.

Chemical precipitation is being used quite extensively but is found very expensive to operate. The three items of expense,—attendance, chemicals, and removal of sludge,—are all very heavy. It has been found very efficient, however, in removing obnoxious acids and other elements in the sewage from mills and other manufacturing establishments.

The so-called bacteria beds, although not so extensively used as the two forms just mentioned, have been found to produce good results. They are operated in a cycle and are very similar to the septic tank system.

The septic tank in its primitive form, the cesspool, has been used for generations, but it has remained for the science of today to discover its real

*Read at the School of Instruction and Sanitary Conference, 1902.

value. Since its installation at Exeter, Eng., for the purpose of purifying sewage, it has been almost constantly before the engineering world. It does its work in a most efficient manner and requires almost no care or attendance. Contact beds and sand filters are often operated in conjunction with the septic tank. The contact beds, which are made from coke, cinders, or gravel, are operated intermittently, as are the sand filters, but on account of the greater amount of voids will handle more sewage per square foot in a given time.

All of these systems with the exception of chemical precipitation depend entirely upon bacterial action and are in no way designed to fulfill any of the conditions of mere mechanical filtration.

For a small community the choice is of necessity reduced to one of two or three systems, and the local conditions of the individual town will further eliminate the possibilities.

The action of the septic tank and contact beds at Exeter, Eng., and the results obtained from the tank alone at Champaign, Ill., furnish ample data for designing these two systems of filtration. So satisfactory have been the results at Champaign that in a great many cases one would be justified in recommending simply the septic tank without filters. This tank at Champaign holds less than two hours' flow, but succeeds in that short time in reducing the matter in suspension 94 per cent, and accomplishes an average reduction in the organic matter in solution of 17 per cent. These results were obtained in cold weather, which makes fair the statement that this is the lowest efficiency the tank will show. The Exeter tank is filled only once in twenty-four hours and the effluent is then flowed intermittently onto coke contact beds. The results obtained as shown by analysis of the filtrates are as follows: Average diminution of dissolved oxidizable organic matter equal to 81 per cent; of free ammonia, 55 per cent; of albuminoid ammonia, 63 per cent; and practically all of the suspended matter is removed.

In designing this plant I have had these two constantly in mind and have endeavored to improve on both by combining with their best points some of the suggestions of Mr. Clark of the Massachusetts Experiment Station at Lawrence, Mass., who has made somewhat extensive experiments on this method of filtration.

THE PLANT.

The plant should be placed near the outfall of the main sewer of the town. As a basis for an estimate of the size of the tank, and also for the beds, if one decides to use the contact beds in conjunction with the tank, the water consumption of the community may be used. This will generally give a very fair estimate. A more accurate determination, and one I

should recommend, may be made by constructing a weir and automatically registering the flow by an arrangement of floats and clockwork. This register should be verified at least once a day by an ordinary measurement of the depth of the flow. The maximum flow at Hanover, as determined by the readings taken in this manner, was .25 cubic feet per second and is maintained for from six to eight hours per day. I shall take this as the basis for my design.

To prevent flooding the tank in times of heavy storms a head manhole must first be planned which will divert anything over the maximum flow directly into the river or brook. Knowing our maximum flow, the size of a weir is easily calculated which will accommodate only this flow. If on a level with the top of this weir we construct a broad flat weir leading to the overflow, then anything in excess of the dry weather flow will be taken care of.

From the head manhole the sewage is conducted down a steep pitch through a reduced pipe to the grit chambers. The reduction in the size of the pipe and the pitch deliver the sewage to the grit chambers with a great velocity, so that the grit is kept constantly stirred and the sludge prevented from stopping. These grit chambers need be only large enough to accommodate a moderate amount of sand and other foreign matter, and afford a good chance for cleaning. From the grit chamber the sewage rises into the tank proper. This is simply a covered box built entirely of cement concrete. If we are to accept the testimony of Mr. Clark, it is not necessary that the tank be covered, but in view of the fact that all the tanks from which we take our data are built in the former manner, and taking into consideration the severity of our climate, it would seem better to specify a covered tank.

The tank is divided by a partition which allows one half of the tank to be shut off and cleaned independent of the other half. The septic tank should be designed so as to be filled four to five times a day at the maximum rate of flow. This will allow from five to six hours for the anaërobic action to take place. The anaërobic bacteria reduce the greater part of the suspended organic matter and part of the matter in solution to mineral substances. What aërobic action there is takes place in the thick scum which forms on the surface of the sewage. It is to give the aërobic bacteria a chance to finish their work that the contact beds are generally added to the system. If the plant is to consist of the septic tank alone, the effluent is taken from the tank and flowed through an aëerator and thence discharged into the stream. A very efficient aëerator is made by flowing the effluent over a broad flat weir and then over a paddle wheel, all of this taking place under a glass roof. Churning the water up in this manner in the bright light tends to exterminate any disease germs which may have been brought from the tank.

Where the contact beds are used the effluent is led from the aëerator onto large tanks filled with coke breeze or cinders, graduated in size from two inches to three inches at the bottom to the size of a walnut at the surface. There are generally five or six beds, four of which are operated at one time. By an automatic arrangement the effluent from the septic tank is first led onto bed No. 1; after this is filled the effluent shuts itself off from bed No. 1 and begins to run onto bed No. 2; when this in turn becomes filled the effluent goes onto bed No. 3 and so on around. In each bed the sewage remains until the bed next to it is filled, when the valve in the underdrain is automatically opened and the effluent passes out. Each bed in turn rests while the bed third from it is filling. The operation is continuous and without the assistance of an attendant. Allowing for a daily flow of 135,000 gallons, which is somewhat in excess of the flow we have assumed, each bed would be filled once in eight hours. This means that the cycle for each bed is two hours filling, two hours setting, two hours emptying, and two hours resting. During this time the aërobic bacteria are completing the work in the reduction of the matter in solution.

On account of the severity of the climate a cover should be specified for the filters, and a small brick house should be over the alternating gear. This latter may be kept warm by a gas jet supplied from the septic tank.

Below is appended an approximate estimate of the cost of the plant as planned:

HEAD MANHOLE.

2¾ cubic yards brick @ \$10.....	\$27.50
½ cubic yard concrete @ \$6.....	3.00
12 feet 8 inches pipe @ \$0.13.....	1.70
1 flapper	2.00
1 manhole cover.....	10.00
2 weirs @ \$2.....	4.00
	<hr/>
	\$48.20

SEPTIC TANK.

88 cubic yards concrete (walls) @ \$5.....	\$440.00
23 cubic yards concrete (floor) @ \$5.50.....	126.50
35 cubic yards concrete (roof) @ \$5.50.....	192.00
Aëerator	5.00
Glass roof.....	10.00
Wood bulkhead.....	5.00
2 4-inch gate valves @ \$10.....	20.00
2 3-inch gate valves @ \$5.....	10.00
2 2-inch gate valves @ \$2.....	4.00
70 feet 10-inch pipe @ \$0.22.....	15.40
150 feet 4-inch pipe @ \$0.06.....	9.00
5 manhole covers @ \$10.....	50.00
500 cubic yards excavation @ \$0.15.....	75.00
	<hr/>
	\$961.90

FILTERS.

88 cubic yards concrete (walls) @ \$5.....	\$440.00
43 cubic yards concrete (floor) @ \$5.50.....	236.50
70 cubic yards concrete (roof) @ \$5.50.....	385.00
5 cubic yards brick @ \$10.....	50.00
4 cubic yards brick (gear house) @ \$10.....	40.00
Roof (gear house).....	20.00
175 feet 10-inch split pipe @ \$0.22.....	38.50
30 feet 10-inch pipe @ \$0.22.....	6.60
150 feet 8-inch pipe @ \$0.15.....	22.50
105 feet 6-inch pipe @ \$0.09.....	9.45
300 feet 4-inch pipe @ \$0.06.....	18.00
5 tanks @ \$5.....	25.00
10 valves @ \$5.....	50.00
200 feet chain @ \$0.05.....	10.00
5 manhole covers @ \$10.....	50.00
1,250 cubic yards excavation @ \$0.10.....	125.00
105 tons coke @ \$4.....	420.00
Cinders	30.00
	<hr/>
	\$1,976.55

SUMMARY.

Head manhole.....	\$48.20
Septic tank.....	961.90
Filters	1,976.55
	<hr/>
	\$2,986.65
Add 10 per cent.....	298.66
	<hr/>
	\$3,285.31

NOTE.—All concrete to be made in the proportions of 6-3-1.

This is, in brief, a description of a sewage purification plant such as almost any small town could adopt. It is simple in construction, may be built at a small cost, requires but little expense for maintenance, and is very efficient. While I should recommend the use of the contact beds in connection with the septic tank wherever practicable, still, as some one has said, it is very probable that the effluent from the septic tank is as free from organisms as many of the streams into which we are now discharging our sewers. When such a satisfactory remedy as this is at hand there is but little excuse for the continued pollution of our streams and rivers.

THE STRUGGLE AGAINST CONSUMPTION.*

BY EDWARD O. OTIS, M. D., BOSTON.

More than seventy-five years ago one of the most eminent physicians of his time, the celebrated Louis of France, wrote the following words: "Phthisis (consumption) almost invariably terminates fatally after a space varying between a few weeks and several years." Sixty-four years later another eminent physician of France, Professor Bouchard of Paris, concluded a lecture as follows: "This disease (consumption), which has such a strong hold on humanity, is curable in the larger number of cases." Which of these contradictory statements is correct? Let us refer to some recent clinical results for the answer.

The two most prominent sanatoria for the treatment of pulmonary tuberculosis in this country are those at Rutland, Mass., and Saranac in the Adirondacks. In the fifth annual report of the sanatorium at Rutland, for the year ending September 30, 1901, Dr. Clapp, one of the visiting physicians, reports 67 per cent of the incipient cases as apparently cured or arrested, and of all cases in all stages of the disease 50 per cent as apparently cured or arrested. Dr. Bowditch, the other visiting physician at the same institution, reports 79 per cent of the purely incipient cases as arrested, and of all cases in all stages 42.23 per cent as arrested, and by "arrested" he means, as he says, cases in which cough, expectoration, bacilli, and fever have disappeared, and where the appearance and general condition have been those of health. The term "cured," or "apparently cured," he does not use until, after the lapse of one or two years, the patient shows no symptoms of relapse.

In the seventeenth annual report of the Adirondack Cottage Sanatorium at Saranac, for the year ending November, 1901, Dr. Trudeau, the physician in charge, reports that of 173 patients discharged during the year, in various stages of the disease, forty-five were apparently cured and in seventy-nine the disease was arrested. "Some sanatoria," says Knopf, "claim as many as 70 per cent of cures where the patients are admitted to treatment in the incipient stages, and I have reason to believe," he continues, "that these figures are exact, for pulmonary tuberculosis in the earlier stages is, indeed, one of the most curable of all chronic diseases."

The evidence is overwhelming that consumption is abundantly curable, both with and without treatment, for autopsies made upon individuals dying of other diseases frequently show cured foci of tuberculosis. "As for my personal experience at the morgue in Paris," said Professor Brouar-

* Read at Concord, N. H., April 29, 1902, before the New Hampshire Association of Boards of Health.

del at the British Congress on Tuberculosis last summer, "where I frequently made *post-mortems* on accidental deaths, I can state that in half the cases, if the person on whom the *post-mortem* is made has lived in Paris for about ten years, I find healed tuberculous lesions. Phthisis is, therefore, curable, he concludes, even in its most advanced stages.

At this same congress Professor Koch remarked in his memorable address that it must be regarded as an undisputed fact that tuberculosis is curable in its early stages. Those of us who have had much to do with this disease can corroborate these statements from our personal experience, although of course the earlier the case of consumption comes under treatment the better the chances for recovery, yet the disease can be arrested in all stages.

"I suppose you receive only the incipient cases," I remarked last summer to Dr. Walther, who is the physician in charge of Nordrach, one of the most famous sanatoria in Europe. "I take any case that comes," he replied, "for I cannot tell what case will and what will not recover." At the present time I have under observation a young girl who had disease of both lungs with cavity in one, and when she first applied at my clinic she manifested all the symptoms of advanced disease. Now, after a year or two of the open-air treatment, she looks the very picture of robust health, and is able to support herself by working.

Consumption, then, is curable. There is no shadow of doubt regarding this fact. The question immediately arises as to the treatment. How is consumption cured? Not by drugs, but by what is known as the hygienic, dietetic treatment, which in brief consists in constant exposure to pure fresh air day and night; abundant and proper food; scrupulous avoidance of over-fatigue either mental or physical, and, in brief, such care of the body as will strengthen, harden, and finally render it an unsuitable soil for the tubercle bacillus. Sometimes complete rest for days or weeks is imperative in the course of treatment. Sometimes moderate exercise is allowable. This treatment seems easy in the telling, but it requires strenuous exertion to carry it out, and for many natures it is almost an impossibility outside of a sanatorium. One has to be trained to it, and kept up to it by constant, continuous, firm supervision. I am sometimes almost inclined to think that, after all, the greatest value of the sanatorium is in this training, and I quite agree with Anders, who says "the principal advantages offered (in the sanatorium) are due to a rigid system of hygiene under the close supervision of competent medical officers."

With the poor it is well-nigh impossible to carry out this treatment at home; hence the incalculable value of state sanatoria for this class, and the obligation of the state to furnish such provision. Many states in this country are now recognizing this duty, I am glad to say. No other

treatment or attempted treatment has stood the test of time but this, the open-air treatment, as best exemplified in the sanatorium. It has produced and is producing the most favorable results, unapproachable by those of any other method.

This established fact of the curability of consumption and its easy and great curability in the early or incipient stage, and the only successful method of cure, the open-air treatment, cannot be too strongly impressed upon the medical profession and the public. The former, the physicians, must discover the disease early, for that is the golden opportunity for treatment. As Prof. Clifford Albutt well says, "There has been much supineness in the matter of early diagnosis and supineness bred of pessimism, of despair. Let us bring the inspiring message of optimism, of enthusiasm, and let every physician, however modest his sphere, remember that upon his alertness depend the life of the sick man and the stamping out of infection. The incipient case of today is the advanced case of tomorrow. Never let muscular strength, red cheeks, or a well-formed chest blind us to canker within" (Address delivered at the British Congress on Tuberculosis).

In the writer's judgment, every person who consults his physician, complaining of being run down, of loss of strength, shortness of breath,—whether or not he has a cough,—should receive a very careful examination of the lungs. On the other hand, the people should likewise seek medical advice when they feel conscious of loss of strength, weight, and appetite, or begin to be a little short of breath. When the diagnosis of pulmonary tuberculosis is once made, the patient should be frankly told the nature of his disease, and the vital importance of immediate recourse to the open-air treatment with all that that implies should be impressed upon him. He should be made to understand that only by strenuous, persistent, patient effort can he recover, and that medicine is of very secondary importance. He should also be carefully instructed as to the means of avoiding infecting others.

But prevention is better than recovery, even if the latter were assured in every case, and prevention is possible, because we now know the true nature of the disease. We know that it is caused by a parasite, the tubercle bacillus, and hence is infectious, contagious, or communicable. We know that the channels by which this infection is conveyed are accessible and controllable, and that they are chiefly the dried sputum of a patient suffering from the disease. "This parasite," says its renowned discoverer, "is a visible, palpable enemy which we can pursue and annihilate, just as we can pursue and annihilate other parasitic enemies of mankind." If it were practicable to isolate every patient at the present time afflicted with pulmonary tuberculosis the disease in a comparatively

short period of time would be stamped out as completely as leprosy was in central Europe in the Middle Ages, through isolation in leper houses. Of course isolation in every case is impracticable and we must, therefore, proceed on less drastic and slower means. We must, so far as possible, control the tuberculous sputum, and at the same time do what we can to render the human soil unsuitable for the growth of the tubercle bacillus. This latter is accomplished by whatever means tend towards the improvement of the health of the people: better sanitation, public and private; improved housing; better preparation of food; more fresh air in living and sleeping rooms.

In a recent conversation with one of the commissioners of Minnesota, who were investigating the subject of state sanatoria, he told me that consumption was most prevalent in his state (Minnesota), not in the crowded portions of the cities, as is most frequently the case, but among the Scandinavian farmers in the country districts, and the cause assigned—which I doubt not was the correct one—was that during the cold winters the farmer shut up his house tight and breathed and re-breathed the same impure air. May not this state of things be a common one among the New Hampshire farmers? Further, sufficient rest after labor, personal care and cleanliness, and the education of the individual in habits of wholesome personal hygiene are all important. In brief, all sanitary measures which will render our houses, streets, towns, and ourselves clean and healthy tend towards rendering the individual sterile to the tubercle bacillus.

To control the tuberculous sputum, we must, as far as possible, have knowledge of the existing cases of consumption; hence the reason for compulsory notification. The people must be instructed as to the dangers of promiscuous spitting. As you are aware, laws against this habit now exist in many places. We must instruct the tuberculous and their families and friends how safely to dispose of the sputum, and that whenever the patient arrives at the stage of softening and is confined to his bed, he should be placed in a room by himself, for there is always the possibility of infection when others occupy the room with him. Again, the room which has been occupied by a tuberculous person should be sufficiently cleaned and disinfected.

Sanatoria should be provided at the expense of the state or community for the poor consumptive who is in the curable stage of the disease, and means of isolation in a consumptive hospital or other institution for the advanced hopeless cases who, from ignorance, helplessness, or willfulness, cannot or do not safely dispose of their infectious sputum. Further, the question of permitting a tuberculous individual, with tubercle bacilli in his expectoration, to pursue his occupation where infection to others is

possible through the so-called drop infection from cough or carelessness in care of the sputum, is one of serious consideration. A cook, waiter, janitor, clerk, house servant, teacher, pupil, baker, or one who handles food of any kind, may be the medium of spreading tuberculosis, if he is in the infectious stage, and evidence is not wanting to prove this. If such persons are removed from their occupation for the public protection, should not the public in turn afford them suitable treatment as well as isolation in a sanatorium, and in addition some support to their families bereft of the wage-earner?

All this seems a colossal undertaking, but the example of other states and countries teaches that it can be done, and the loss and suffering entailed by this most prevalent and destructive disease warrant, nay, demand the effort. The public or state sanatorium subserves three most important purposes:

First. It affords the best means of cure.

Second. It isolates the consumptive.

Third. It sends forth teachers, in its cured patients, of wholesome hygienic living and of the avoidance of danger from the sputum.

Since the discovery that pulmonary tuberculosis is communicable an obligation is put upon the state to protect itself, as in the case of other contagious diseases, and in doing so to afford the unfortunate victim of the disease an opportunity of recovery when private means are wanting for this purpose. It is, moreover, an economic measure, for consumption is most prevalent at the most efficient working period of a man's life, and the value of the labor of those saved by sanatorium treatment will, in the long run, more than compensate for the outlay in the construction and maintenance of the sanatorium.

The insurance societies of Germany which insure against sickness and old age are finding it more economical to send their consumptives to a sanatorium and have them again returned to their work with their disease cured or arrested than to pay them insurance through the long disablement caused by the progressing disease. The statistics of the German Imperial Board of Insurance show that in 1897 and 1898, 8,200 insured men and women were treated, and of these 5,848, or 71 per cent, left the sanatoria fit for work (Hillier, "International Aspect of the Control of Tuberculosis," read at the British Congress on Tuberculosis).

Since the people of Massachusetts have observed the marvelous results of the sanatorium treatment at Rutland, and the instruction spread broadcast over the state as to the avoidance of the disease, through those treated and cured at the sanatorium, they not only willingly and eagerly tax themselves for the continued maintenance of this institution, but there is at the present time a bill before the legislature of that state for an

appropriation for a second similar institution. Almost every country now recognizes the value of the sanatorium. Germany at the present time has sixty-eight sanatoria for its poor consumptives and nineteen for paying ones, affording accommodation in the course of a year for twenty thousand patients. England has many free and paying consumptive hospitals and sanatoria. Recently Sir Ernest Cassel placed at the disposal of the king \$1,000,000 which his majesty proposes to devote to the establishment of sanatoria, in view of the enormous prevalence of tuberculosis. Russia, France, Austria, Belgium, Norway, Holland, Italy, Canada, Spain, Cuba, and others either have sanatoria already established or in construction or contemplation. In this country every New England state and many of the middle and western ones have now bills before their legislatures either for an appropriation for a sanatorium or the appointment of a commission to consider the matter. In a comparatively few years I feel certain that at least the majority of the states will have one or more sanatoria, and thus we shall see the whole civilized world successfully and humanely treating their consumptives, and in just so far protecting themselves.

In the Middle Ages who ever thought that leprosy, then well-nigh universal over western Europe, would ever be exterminated? But leper houses accomplished it. I do not mean, however, to say that sanatoria alone will exterminate consumption, though they will greatly aid in so doing. We must also labor, as I have indicated, in the way of general prophylaxis. Educate the public as to the danger of infection. Teach them that in the consumptive, and in him alone, resides all the danger, and that when he expectorates or coughs out tubercle bacilli in his sputum where it can become dried, then the army of infecting micro-organisms is on its march of death and destruction, for it has been estimated that a consumptive emits daily 800,000,000 tubercle bacilli. We must labor to disabuse the public of their old erroneous ideas of consumption regarding its incurability and inheritance. It is most difficult to eradicate this settled conviction of inheritance, and most people, I suspect, still believe it. It was a very natural conclusion to draw when one saw member after member of the same family succumb to the disease. "Now, however," says Koch, "it has been demonstrated by thorough investigation that though hereditary tuberculosis is not absolutely non-existent, it is, nevertheless, extremely rare, and we are at liberty, in considering our practical measures, to leave this form of origination entirely out of account."

Associations for the prevention of tuberculosis now exist in almost every civilized country, whose object is to disseminate information regarding tuberculosis; to educate public opinion; to aid state and local boards of health, and to initiate efforts in various ways towards prevention. An

immense amount of good work has already been accomplished by these means. I have only to refer, as an example of this kind of effort, to the great National Association for the prevention of tuberculosis of England, with its local branches, which culminated in the Congress on Tuberculosis, held in London last summer. How much can be accomplished by these various methods of prevention is shown by the decrease of mortality from tuberculosis in Prussia in the years 1889 to 1897, as quoted by Koch in his address before referred to. Before 1889 the average mortality was 31.4 per 10,000, while from 1889 to 1897 it was only 21.8 per 10,000, which meant that in that space of time the number of deaths from tuberculosis were 184,000 less than was to be expected from the average of the preceding years. Again, in New York the mortality from tuberculosis has diminished more than 35 per cent since 1886. In all I have said I have taken it for granted that we all realize the enormous prevalence of tuberculosis, and that it is a universal plague, annually destroying 3,000,000 in the whole world and infecting yearly about 15,000,000, an appalling number, indeed. But our hope in the struggle is founded upon four great facts:

First. That pulmonary tuberculosis is contagious and not inherited.

Second. That it is avoidable.

Third. That it is curable.

Fourth. That the sputum of the consumptive is the main source of infection and that this is accessible and can be controlled.

I close with the words of a recent writer, himself a victim of tuberculosis and cured by the sanatorium treatment at Nordrach: "When every consumptive who needs it will receive sanatorium treatment at the general expense, and be insured, where necessary, suitable work and life conditions thereafter, then will the days of this scourge be numbered. Then will man no longer be called upon in the bloom of his manhood to face, with his mental faculties unimpaired, a death by inches. Then will break the dawn for a healthier and happier people" (James Arthur Gibson, "Westminster Review," April, 1902).

INDEX.

	Page.
Aacworth, water supply of.....	47
Albany, water supply of.....	47
Alexandria, water supply of.....	47
Allenstown, water supply of.....	47
Alstead, water supply of.....	47
Alton, water supply of.....	48
Amherst, water supply of.....	49
Andover, cases of lead poisoning.....	120
water supply of.....	49
Antrim, water supply of.....	50
"A septic tank designed for a small village," by E. H. Hunter, C. E.	219
Ashland, water supply of.....	51
Atkinson, water supply of.....	51
Auburn, examination of ice supply.....	125
water supply of.....	51
Barnstead, water supply of.....	51
Barrington, water supply of.....	52
Bartlett, water supply of.....	52
Bath, water supply of.....	52
Bedford, water supply of.....	53
Belmont, water supply of.....	53
Bennington, water supply of.....	53
Benton, water supply of.....	54
Berlin, water supply of.....	54
Bethlehem, water supply of.....	55
Boards of health, local.....	xxii
Boscawen, water supply of.....	55
Bow, water supply of.....	56
Bradford, water supply of.....	56
Brentwood, water supply of.....	56
Bridgewater, water supply of.....	56
Bristol, water supply of.....	56
Brookfield, water supply of.....	56
Brookline, water supply of.....	56
Campton, water supply of.....	57
Candia, water supply of.....	57
Canaan, water supply of.....	58
Canterbury, water supply of.....	58
Carroll, water supply of.....	59
Center Harbor, water supply of.....	59

Charlestown, water supply of.....	59
Chatham, water supply of.....	59
Chester, water supply of.....	59
Chesterfield, water supply of.....	59
Chichester, water supply of.....	59
Claremont, water supply of.....	59
Clarksville, water supply of.....	61
Commissioners of Lunacy.....	xxvii
Concord, examination of ice supply.....	127
water supply of.....	61
Consumption (see also tuberculosis).....	viii
struggle against.....	224
"Construction of village sewers," by Robert Fletcher, Ph. D.....	214
Conway Village, water supply of.....	63
Cornish, water supply of.....	63
Croup and diphtheria.....	xi
Croydon, water supply of.....	63
Dalton, water supply of.....	63
Danbury, water supply of.....	64
Danville, water supply of.....	64
Deaths from certain specified causes.....	vi
Deering, water supply of.....	64
Denige test for milk.....	146
Derry, water supply of.....	64
Diagnosis difficulties in smallpox.....	xvi
Diagram No. 1, showing total number of water supplies examined, and the sources from which they were derived.....	8
No. 2, showing results of examinations of water supplies..	9
No. 3, showing results of examinations of well supplies....	9
No. 4, showing results of examinations of spring supplies..	9
No. 5, showing results of examinations of pond supplies...	9
No. 6, showing results of examinations of stream supplies..	10
Diphtheria bacilli, clinical evidence of.....	178
guinea pig test.....	178
in well persons, danger of infection from.....	179
frequency of Wesbrook's types	187
prevalence of.....	176
report on.....	175
virulence of.....	177, 189
Wesbrook's classification of.....	185
and croup.....	xi
bacteriology of.....	203
bacteriological work in.....	158
cause of.....	203
examinations for release of quarantine.....	197
interpretation of results.....	197
Klebs-Loeffler bacillus.....	182
methods of examination.....	207
modes of dissemination.....	203
negative cultures.....	196

Diphtheria, other infections simulating.....	195
outfits, where they may be obtained.....	170
portals of infection.....	204
prophylaxis of.....	205
report of examinations in cases of suspected.....	161
"Diphtheria from a bacteriological point of view," by Dr. Irving A. Watson.....	192
Diseases, communicable, recent legislation in.....	xviii
Dorchester, water supply of.....	64
Dover, water supply of.....	64
Dublin, water supply of.....	65
Dummer, water supply of.....	65
Dunbarton, water supply of.....	65
Durham, water supply of.....	65
East Kingston, water supply of.....	66
Easton, water supply of.....	66
Eaton, water supply of.....	66
Effingham, water supply of.....	66
Ellsworth, water supply of.....	66
Enfield, water supply of.....	66
Epping, water supply of.....	66
Epsom, water supply of.....	66
Errol, water supply of.....	67
Exeter, water supply of.....	67
Farmington, water supply of.....	68
Fitzwilliam, water supply of.....	68
Francestown, water supply of.....	68
Franconia, water supply of.....	68
Franklin, cases of lead poisoning in.....	122
water supply of.....	69
Franklin Falls, cases of lead poisoning in.....	119
Freedom, water supply of.....	70
Fremont, water supply of.....	70
Goffstown, examination of ice supply.....	126
water supply of.....	70
Gorham, water supply of.....	70
Gilford, water supply of.....	70
Gilmanton, water supply of.....	70
Gilsum, water supply of.....	70
Goshen, water supply of.....	71
Grafton, water supply of.....	71
Grantham, water supply of.....	72
Greenfield, water supply of.....	72
Greenland, water supply of.....	72
Greenville, water supply of.....	72
Groton, water supply of.....	73
Groveton, water supply of.....	73
Hampstead, water supply of.....	73
Hampton, water supply of.....	73
Hampton Falls, water supply of.....	74

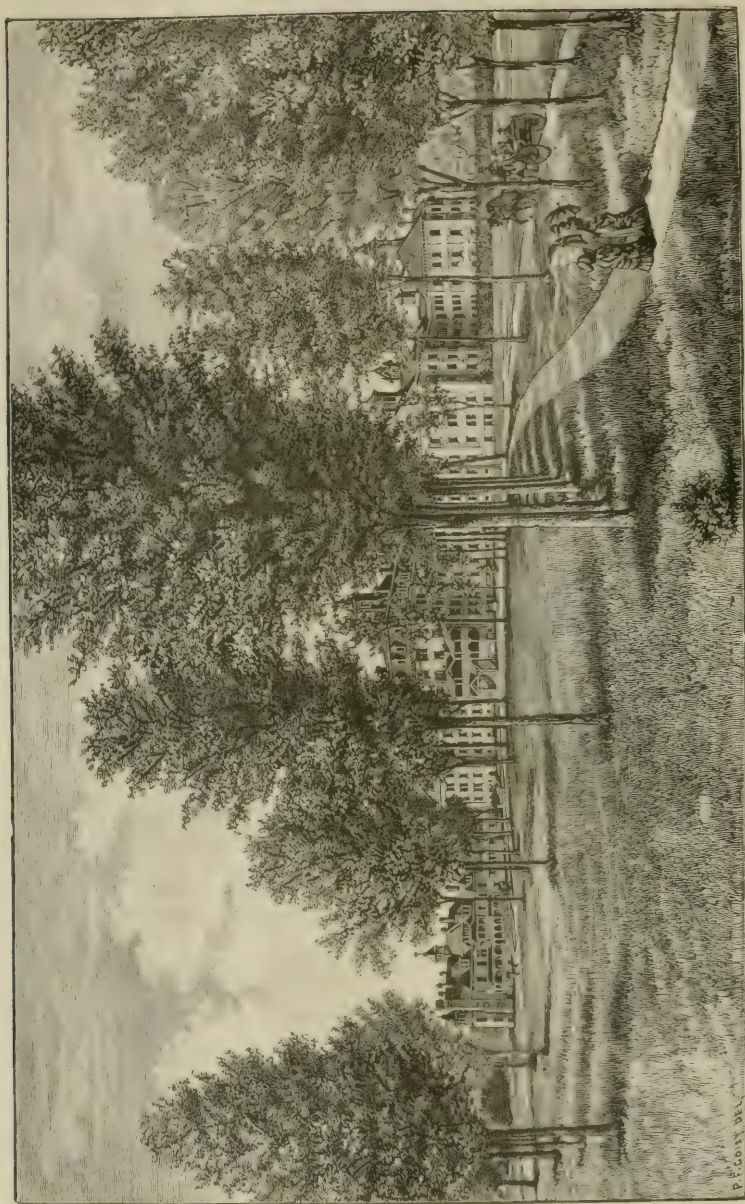
Hancock, water supply of.....	74
Hanover, water supply of.....	74
Harrisville, water supply of.....	75
Hart's Location, water supply of.....	75
Haverhill, water supply of.....	75
Hebron, water supply of.....	76
Henniker, water supply of.....	76
Herner's test for milk.....	145
Hill, water supply of.....	76
Hillsborough Bridge, water supply of.....	77
Hinsdale, water supply of.....	78
Holderness, water supply of.....	78
Hollis, water supply of.....	78
Hooksett, water supply of.....	78
Hopkinton, water supply of.....	79
Hudson, water supply of.....	80
Hydrochloric acid test for milk.....	145
Ice and water, examination of.....	125
Influenza	x
Jackson, water supply of.....	80
Jaffrey, water supply of.....	81
Jefferson, water supply of.....	80
Jorissen's test for milk.....	146
Keene, cases of lead poisoning in.....	120
water supply of.....	84
Kensington, water supply of.....	85
Kingston, water supply of.....	85
Laconia, water supply of.....	85
Lancaster, water supply of.....	86
Landaff, water supply of.....	86
Langdon, water supply of.....	86
Lead poisoning as related to water supplies.....	117
Lebanon, water supply of.....	87
Lebbin's test for milk.....	146
Lee, water supply of.....	87
Legislation, recent, regarding communicable diseases.....	xviii
Lempster, water supply of.....	87
Lisbon, water supply of.....	87
Lincoln, water supply of.....	88
Littleton, water supply of.....	89
Local boards of health.....	xxii
Londonderry, water supply of.....	89
Loudon, water supply of.....	89
Lunacy, commissioners of.....	xxvii
Lyman, water supply of.....	90
Lyme, water supply of.....	90
Lyndeborough, water supply of.....	90
Madbury, water supply of.....	90
Madison, water supply of.....	90
Malaria, examinations in.....	168

Malaria, examinations, methods of.....	213
outfits, where they may be obtained.....	170
Manchester, examinations of ice supply.....	125
water supply of.....	90
Marlborough, cases of lead poisoning in.....	122
water supply of.....	93
Marlow, cases of lead poisoning in.....	122
water supply of.....	93
Mason, water supply of.....	93
Measles	209
Meredith, water supply of.....	93
Merrimack, water supply of.....	94
Middleton, water supply of.....	94
Milan, water supply of.....	94
Milford, cases of lead poisoning in.....	119, 120
water supply of.....	94
Milk, inspection of, recent legislation.....	xx
tests for.....	145, 146
Millsfield, water supply of.....	95
Milton, water supply of.....	95
Monroe, water supply of.....	95
Mont Vernon, water supply of.....	95
Moultonborough, water supply of.....	95
Nashua, water supply of.....	95
New Boston, water supply of.....	96
Newbury, water supply of.....	96
Newcastle, water supply of.....	96
New Durham, water supply of.....	96
Newfields, water supply of.....	96
New Hampton, cases of lead poisoning.....	122
water supply of.....	96
Newington, water supply of.....	97
New Ipswich, water supply of.....	97
New London, water supply of.....	97
Newport, cases of lead poisoning.....	121
water supply of.....	97
Newton, water supply of.....	97
North Hampton, water supply of.....	93
Northfield, water supply of.....	98
Northwood, cases of lead poisoning.....	128
water supply of.....	98
Nottingham, water supply of.....	98
Orange, water supply of.....	98
Orford, water supply of.....	98
Ossipee, water supply of.....	99
Outfits, bacteriological, where they may be obtained.....	170
Pelham, water supply of.....	99
Pembroke, water supply of.....	99
Peterborough, water supply of.....	100
Piermont, water supply of.....	101

Pittsburg, water supply of.....	101
Pittsfield, water supply of.....	101
Plainfield, water supply of.....	101
Plaistow, water supply of.....	101
Plymouth, water supply of.....	102
Pneumonia	viii
Poisons, recent legislation regarding.....	xxi
Portsmouth, water supply of.....	102
Quarantine, examinations for release of diphtheria.....	197
Randolph, water supply of.....	103
Raymond, water supply of.....	103
"Report on diphtheria bacilli in well persons," by a committee of the Massachusetts Association of Boards of Health.....	175
Richmond, water supply of.....	103
Rochester, water supply of.....	104
Rollinsford, water supply of.....	104
Roxbury, water supply of.....	104
Rumney, water supply of.....	104
Rye, water supply of.....	105
Salem, water supply of.....	105
Salisbury, water supply of.....	105
Sanatorium for consumptives, state, commission on.....	xxvi
Sanbornton, water supply of.....	106
Sandown, water supply of.....	106
Sandwich, water supply of.....	106
Scarlet fever.....	xiii
definition, cause, etc.....	208
dissemination of.....	209
prophylaxis of.....	209
School of instruction for health officers and sanitary conference....	xxiii
Seabrook, water supply of.....	106
Sewers, a septic tank designed for a small village	219
construction of, conditions of success.....	218
cost of.....	216
straight lines and manholes... ..	216
tight joints.....	216
underdrains	217
danger of freezing.....	217
flushing	217
Sharon, water supply of.....	106
Smallpox	xiii
and other eruptive diseases, regulations relating to....	xv
difficulties of diagnosis.....	xvi
regulations	
"Some bacteriological methods of interest to boards of health," by Arthur K. Day, M. D.....	211
Smersworth, water supply of.....	106
South Hampton, water supply of.....	107
Springfield, water supply of.....	107
Sputum, examinations of.....	152

Sputum, examinations of, interpretation of results.....	156
report on.....	155
Stark, water supply of.....	107
State Laboratory of Hygiene.....	xxi
an act to establish.....	149
bacteriological departments.....	151
chemical department.....	150
Stewartstown, West, water supply of.....	107
Stoddard, water supply of.....	107
Strafford, water supply of.....	107
Stratford, water supply of.....	107
Stratham, water supply of.....	108
Sullivan, water supply of.....	108
Sunapee, water supply of.....	108
Surry, water supply of.....	109
Sutton, water supply of.....	109
Swanzy, water supply of.....	109
Tamworth, water supply of.....	110
Temple, water supply of.....	110
"The bacteriology of our most common diseases," by Prof. H. N. Kingsford	200
The commission on state sanatorium for consumptives.....	xxvi
The Sanitary Bulletin.....	xxv
"The struggle against consumption," by Dr. Edward O. Otis.....	224
Thornton, water supply of.....	110
Tilton, water supply of.....	110
Troy, cases of lead poisoning in.....	121
water supply of.....	110
Tuberculosis (see also consumption).	
definition of cause.....	206
examination of sputa.....	152
geographical distribution of. race, sex, etc.....	206
methods of bacteriological examinations.....	208
mode of dissemination.....	206
outfits, where they may be obtained.....	170
portals of infection.....	207
prophylaxis of.....	208
Tuftonborough, water supply of.....	111
Typhoid fever, bacteriological work in.....	164
bacteriology of.....	200
interpretation of results.....	166
methods of examination.....	212
mode of dissemination.....	200
outfits, where they may be obtained.....	170
portals of infection.....	202
prophylaxis of.....	202
report on specimens examined.....	167
Unity, water supply of.....	111
Vaccination, the question of.....	xvi
Wakefield, water supply of.....	111

Walpele, water supply of.....	111
Warner, water supply of.....	111
Warren, water supply of.....	112
Washington, water supply of.....	113
Water and ice, examination of.....	125
bacteriological examination of.....	213
supplies, examination of.....	3
lead poisoning, methods employed.....	12
lead poisoning as related to.....	117
of cities and towns.....	45-116
Weare, water supply of.....	113
Webster, water supply of.....	113
Wentworth, water supply of.....	113
Westmoreland, water supply of.....	113
Whitefield, water supply of.....	113
Wilmot, water supply of.....	114
Wilton, water supply of.....	114
Winchester, water supply of.....	114
Windham, water supply of.....	114
Windsor, water supply of.....	114
Wolfeborough, water supply of.....	114
Woodstock, water supply of.....	115
Woodsville, water supply of.....	115



NEW HAMPSHIRE STATE HOSPITAL.

ANNUAL REPORTS

OF THE

BOARD OF VISITORS, TRUSTEES, SUPERINTENDENT,
TREASURER, AND FINANCIAL AGENT

OF THE

NEW HAMPSHIRE
STATE HOSPITAL

TO THE

GOVERNOR AND COUNCIL

NOVEMBER, 1902

VOLUME III. PART I.

MANCHESTER, N. H. :
PRINTED BY THE JOHN B. CLARKE COMPANY,
1902.

TABLE OF CONTENTS.

	Page.
Officers of the institution	5
Resident officers	6
Visiting committee	7
Report of board of visitors	8
Report of trustees	9
Report of the superintendent	15
Statistical tables	31
Report of the treasurer	54
Report of the financial agent	60
Audit of accounts by bank commissioners	74
Report of the treasurer of building committee	85
General exhibit of products of farm	87
Milk record	94
Directions concerning admission of patients	101
Laws relating to the hospital	105
By-laws of the trustees	117
Training school for nurses	121
Graduating address to class of 1901	127
Graduating address to class of 1902	137
Service manual	146
Medical report of men's department	161
Medical report of women's department	165
Succession of officers	169



BANCROFT BUILDING — FROM THE SOUTH.

OFFICERS OF THE INSTITUTION.

BOARD OF VISITORS.

(EX OFFICIO.)

HIS EXCELLENCY CHESTER B. JORDAN.

HON. JAMES B. TENNANT,

HON. LORING B. BODWELL,

HON. CHARLES H. HERSEY,

HON. EDMUND E. TRUESDELL,

HON. ROBERT N. CHAMBERLIN,

HON. BERTRAM ELLIS, *President of the Senate.*

HON. CYRUS H. LITTLE, *Speaker of the House of Representatives.*

} *Councilors.*

BOARD OF TRUSTEES.

JOHN A. SPALDING, *President*, Nashua.

JOSEPH B. WALKER, *Secretary*, Concord.

WILLIAM G. PERRY, M. D., Exeter.

C. H. BOYNTON, M. D., Lisbon.

W. F. THAYER, Concord.

GEORGE B. CHANDLER, Manchester.

MORRIS CHRISTIE, M. D., Antrim.

JAMES A. EDGERLY, Somersworth.

GEORGE W. PIERCE, M. D., Winchester.

HENRY B. QUINBY, Lakeport.

JOHN McCRILLIS, Newport.

JOHN M. MITCHELL, Concord.

RESIDENT OFFICERS.

C. P. BANCROFT, M. D.	Superintendent
F. L. HILLS, M. D.	First Assistant Physician
C. S. WALKER, M. D.	Second Assistant Physician
MR. A. F. TANDY	Steward
MRS. MARY A. TANDY	Housekeeper
MRS. MILLIE C. GODFREY,	
	Superintendent Training School
MR. M. P. RYAN	Supervisor

VISITING COMMITTEE.

FIRST HALF OF MONTHS.

Dec.,	1902.	HON. J. B. WALKER, Concord.
Jan.,	1903.	MR. WILLIAM F. THAYER, Concord.
Feb.,		DR. MORRIS CHRISTIE, Antrim.
March,		HON. JAMES A. EDGERLY, Somersworth.
April,		DR. GEORGE W. PIERCE, Winchester.
May,		MR. JOHN McCRILLIS, Newport.
June,		HON. JOHN M. MITCHELL, Concord.
July,		MR. HENRY B. QUINBY, Lakeport.
Aug.,		DR. WILLIAM G. PERRY, Exeter.
Sept.,		HON. G. BYRON CHANDLER, Manchester.
Oct.,		HON. JAMES A. EDGERLY, Somersworth.
Nov.,		HON. JAMES A. SPALDING, Nashua.

SECOND HALF OF MONTHS.

Dec.,	1902.	HON. JOHN M. MITCHELL, Concord.
Jan.,	1903.	DR. C. H. BOYNTON, Lisbon.
Feb.,		MR. HENRY B. QUINBY, Lakeport.
March,		DR. WILLIAM G. PERRY, Exeter.
April,		HON. G. BYRON CHANDLER, Manchester.
May,		HON. JAMES A. SPALDING, Nashua.
June,		HON. J. B. WALKER, Concord.
July,		DR. C. H. BOYNTON, Lisbon.
Aug.,		MR. WILLIAM F. THAYER, Concord.
Sept.,		DR. GEORGE W. PIERCE, Winchester.
Oct.,		DR. MORRIS CHRISTIE, Antrim.
Nov.,		MR. JOHN McCRILLIS, Newport.

REPORT OF BOARD OF VISITORS.

STATE OF NEW HAMPSHIRE.

EXECUTIVE DEPARTMENT.

CONCORD, December 2, 1902.

The governor and council, the president of the senate, and the speaker of the house of representatives, as required by law, having visited the New Hampshire State Hospital, inspected the several departments and examined into the condition of the patients, are satisfied that the design of the institution is carried into full effect by the existing management.

CHESTER B. JORDAN,
Governor.

JAMES B. TENNANT,
LORING B. BODWELL,
CHARLES H. HERSEY,
EDMUND E. TRUESDELL,
ROBERT N. CHAMBERLIN,

Councilors.

BERTRAM ELLIS,
President of the Senate.

CYRUS H. LITTLE,
Speaker of the House.

REPORT OF TRUSTEES.

To His Excellency the Governor and to the Honorable Council:

The Trustees of the New Hampshire State Hospital present this, their

FIFTY-SIXTH REPORT.

This report covers the two years ending September 30, 1902. During this period the number of patients has been larger than during any other similar period since the opening of the hospital. This fact has been due in part to the constantly increasing numbers seeking treatment, and in part to the destruction in November, 1901, of the main building at the Merrimack county poor farm at North Boscawen. As a consequence of this event, fifty-three of its indigent insane inmates were summarily transferred to the wards of this institution.

The number of patients in the hospital at the close of the last year, September 30, 1902, was four hundred and sixty-four; a number considerably above the hospital's normal capacity.

The financial condition of the hospital is clearly set forth in the accompanying reports of its treasurer and of its financial agent. To these your attention is respectfully invited. It will be seen by the former, which gives its receipts and expenditures for the last two years, that it has lived upon its income and been self-sustaining.

The reports of the latter give in detail the several permanent funds of the institution and the various securities in which they are invested. These funds now number twenty-two, and the aggregate amount of their investments, at their par value, is three hundred and one thousand eight hundred and thirty-one dollars and ninety-two cents (\$301,831.92). Estimated at their market value this sum would be somewhat increased. As these mature and reinvestments are made, the lower rates

of interest of late prevailing lessen somewhat the income of the particular funds to which they may belong.

The appropriation of fifteen thousand dollars, made by the legislature at its last session to enable the hospital to erect a suitable dwelling for its farm foreman, to construct fireproof elevator shafts in the buildings occupied by patients, an additional exit of brick and iron from the chapel, to remodel the bakery, and to accomplish several other important purposes, has been expended as ordered in the act of appropriation. For a particular knowledge regarding this work you are respectfully referred to the accompanying reports of the superintendent and of the building committee.

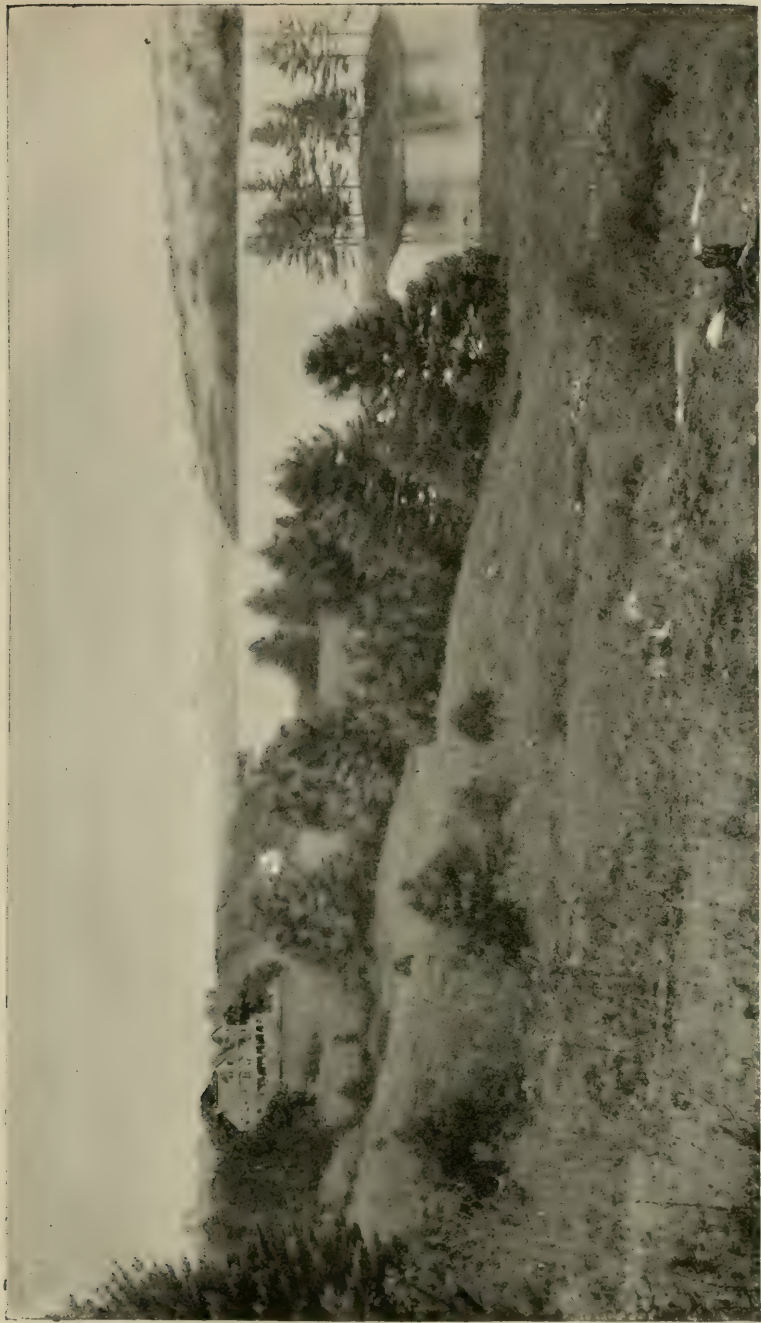
The building recently constructed for occupation by female nurses of the hospital, in their intervals between ward duties, has fully accomplished the object sought in its erection. Some twenty-five to thirty of these here find the quiet and rest requisite to prepare them for highest service along their lines of duty. They here meet in social converse and find that refreshment of mind and body which they formerly but partially secured in dormitories adjacent to their respective wards.

The rooms which they have vacated now afford accommodations to twenty-five patients, and the cost of this building shows that they have been thus obtained at a less expense than is usually incurred in the erection of new buildings designed for a like number.

The summer sanitarium, established some ten years ago, on the westerly shore of Penacook lake, has proved successful beyond our highest expectations. By successive purchases the hospital land has been increased from its original amount of some half a dozen acres to about fifty-five, five of which lie upon the west side of the old Penacook Lake road and the remainder upon that opposite. Upon the latter, which stretches along the lake shore for a half mile, two commodious houses have been erected which afford accommodations for nearly fifty patients. Here, sheltered from the northwest winds, out-of-door life is enjoyable from early June to late October, and has proved of very great benefit to the large number of patients who, from time to time, have been residents there.



WALKER SUMMER COTTAGE.



WALKER SUMMER COTTAGE AND LAKE PENACOOK.

A secondary benefit accrues, also, to the hospital and its inmates by a withdrawal for the summer of the patients placed here, whereby its population is somewhat reduced, to the increased comfort of those remaining.

The land upon the west side of the road before mentioned was purchased to secure a spring thereon, and the control of a brook which passes through the hospital grounds to the lake. From this spring the purest water flows by gravity to all parts of them and relieves the institution from the expense of pumping from the lake, to which expense it was formerly subjected.

That the accommodations here afforded may require enlargement is not unlikely. At present, however, the need is not urgent nor are the means for its attainment at hand.

The gradual increase of the number of hospital buildings and the constantly growing number of patients are seriously lessening our arable area. More and more of it is being required for remedial purposes, as large numbers of patients are daily taken in suitable weather to different parts of the grounds about the institution for exercise and recreation.

As a consequence the amount of hay raised for the production of milk has of late been much diminished, while the quantity required has been increased. Thus far the hospital farm has furnished the milk consumed by its inmates. Whether, with lessening hay crops, it had best continue so to do is a question requiring consideration. If the present course be continued an increase of grass land will be necessary.

The quantity of milk required each day by a family of some five hundred and fifty persons is by no means inconsiderable. According to the report of the farm manager for the year ending September 30, 1902, the amount produced during that period was 125,788 quarts, being an average of $344\frac{2}{3}$ quarts per day, all of which was used in the institution. To obtain this, in addition to the grain and ensilage consumed by them, the cows have required a considerable amount of hay in addition to that grown upon the hospital farm, which has been obtained by purchase.

These facts enter into a consideration of the question above mentioned:

1. Milk can be produced at a less cost than it can be bought.

2. By raising it, its quality can be made certain.

3. If its production be continued, more or less hay must be annually purchased or the present acreage of the hospital be somewhat increased.

It has ever been the purpose of the managers of the hospital to render it as secure as possible, with the means at their disposal, from disasters from fire. In this effort the state has co-operated. The dust flues extending from the basements to the upper stories, originally of wood, have been superseded by flues of brick. So have the elevator shafts through which their food is transported to the different wards, while the wooden ventilating ducts in the attics of the older buildings have given place to conduits of iron. Outside fire-escapes have also been constructed, notably an iron stairway, inclosed in brick, from the chapel and old laundry building to the ground, which was paid for from the appropriation made by the legislature before mentioned.

While most of the important work of this character has been accomplished, some more yet remains to be done for which no adequate means have been provided. The old, narrow, tortuous stairs of wood, leading from the wards of the Chandler, Kimball, Peaslee, and Fisk wings, should give way to safer and more convenient stair flights of iron. Your trustees, therefore, respectfully recommend that this change be made. From careful estimates, the materials and work required to effect this object would be about seventy-five hundred dollars (\$7,497).

The number of patients now in the hospital exceeds its capacity to properly accommodate. Crowding not only interferes with the comfort of all under treatment, but is a serious obstacle in the way of their recovery. It is also an important fact, not always realized, that each of the several wards, twenty-one in number, requires occasional renovation and repairs. To secure these it must be temporarily vacated by its inmates, whose comfort demands an unoccupied ward. If this is wanting, as is now the case, and those removed are crowded into one already full, great discomfort is experienced both by those transferred and those into whose company they are forced.

The best remedy for this untoward state of things, which has become quite embarrassing, is the erection of a two-story wing, upon the north and south sides of the present structure, capable together of accommodating some ninety chronic demented and infirm patients. From plans and estimates carefully made, such additions would cost about fifty thousand dollars (\$50,736.80).

After a careful consideration of the subject your trustees have reached the opinion that it is for the interest of the state to erect these two additional buildings and the four fireproof stairways before mentioned, and that for these the legislature be respectfully asked to make an adequate appropriation.

On the twenty-eighth day of last October, the New Hampshire State Hospital completed its sixtieth year of service in behalf of the insane of this state.

In his report of 1843 the hospital's first superintendent, Dr. George Chandler, remarks: "On the 25th of October, 1842, the asylum was so far completed and finished that one man and myself stayed over night in the establishment, and the next day a very noisy and violent man was brought to us. From that time patients have come in as fast as we have been prepared to receive them."

From this beginning, with a single patient, the whole number treated had risen at the close of the last hospital year to seven thousand seven hundred and twenty-four. As showing the constant rate of this increase, the following quotations from the hospital records of the number of patients under treatment during the last year of each decade since its opening are here presented:

During the hospital year 1852, 224; 1862, 282; 1872, 377; 1882, 406; 1892, 531; 1902, 670.

This gradual increase of the number of patients roughly synchronizes with the additions of new buildings from time to time for their accommodation. The original group consisted of a central administration building and the two wings known as the Fisk and Kimball buildings. These afforded accommodation for the physicians, employees, and ninety-six patients.

To these the Chandler wing was added in 1849, and five years later the older portion of the Peaslee building was erected. In 1855 the Rumford building was constructed, followed by the erection of the Kent in 1867, the Chapel in 1868, the Bancroft in 1882, the Twitchell in 1894, and that of the nurses in 1900. Twice has the administration building been enlarged, the first time in 1860 and the second in 1879, while the Peaslee building was doubled in size in 1874. To these, constituting the main group, have also been added from time to time the cottage, the boiler house, the laundry, and the three comely dwellings occupied by the farmer, the gardener, and the machinist. When it is considered that immediately attached to these are grounds of about one hundred and twenty-two acres, devoted in part to remedial out-of-door treatment of patients, and in part to agricultural and horticultural purposes, it becomes apparent that the state has in these buildings and grounds a very valuable property, and that but few if any others are better equipped to minister to the wants of this unfortunate class of their citizens. While the high reputation which the New Hampshire State Hospital has attained is due in a large measure to the faithful services of its officers and employees, these would have been vain but for the constant support of the state.

Respectfully submitted.

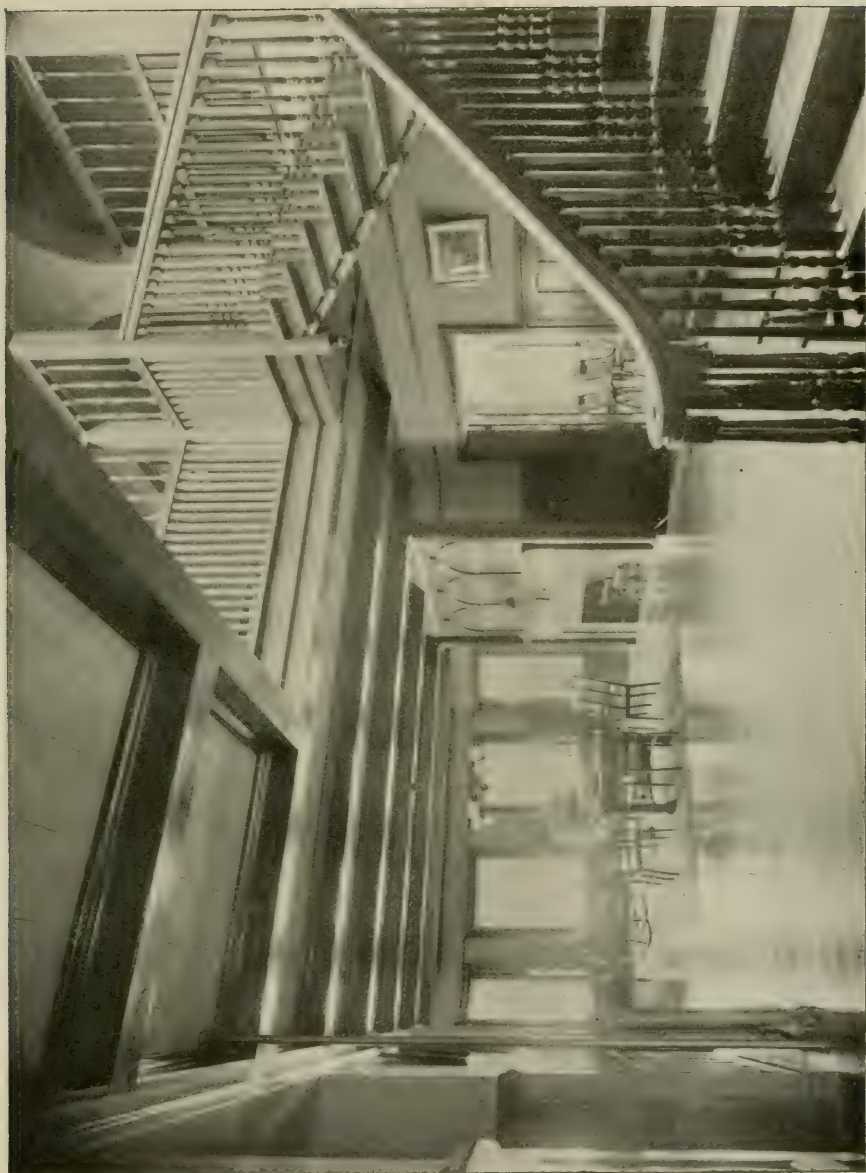
JOHN A. SPALDING,
WILLIAM G. PERRY,
C. H. BOYNTON,
W. F. THAYER,
GEORGE B. CHANDLER,
MORRIS CHRISTIE,
JAMES A. EDGERLY,
GEORGE W. PIERCE,
HENRY B. QUINBY,
JOHN MCCRILLIS,
JOHN M. MITCHELL,
JOSEPH B. WALKER,

Trustees.

CONCORD, N. H., November 20, 1902.



TWITCHELL HOUSE.



TWITCHELL HOUSE -- INTERIOR.



REPORT OF THE SUPERINTENDENT.

The superintendent respectfully submits the sixtieth annual report of the New Hampshire State Hospital for the biennial period ending September 30, 1902.

The year beginning October 1, 1900, commenced with four hundred and twenty-five patients,—two hundred and three men and two hundred and twenty-two women.

The year beginning October 1, 1902, commenced with four hundred thirty-four patients,—two hundred six men and two hundred twenty-eight women.

The daily average of patients for the year ending September 30, 1901, was 425.65, and for the year ending September 30, 1902, was 466.35.

The mortality rate for the first of the two years covered by this report was 7.9, and for the year just closed is 8.3.

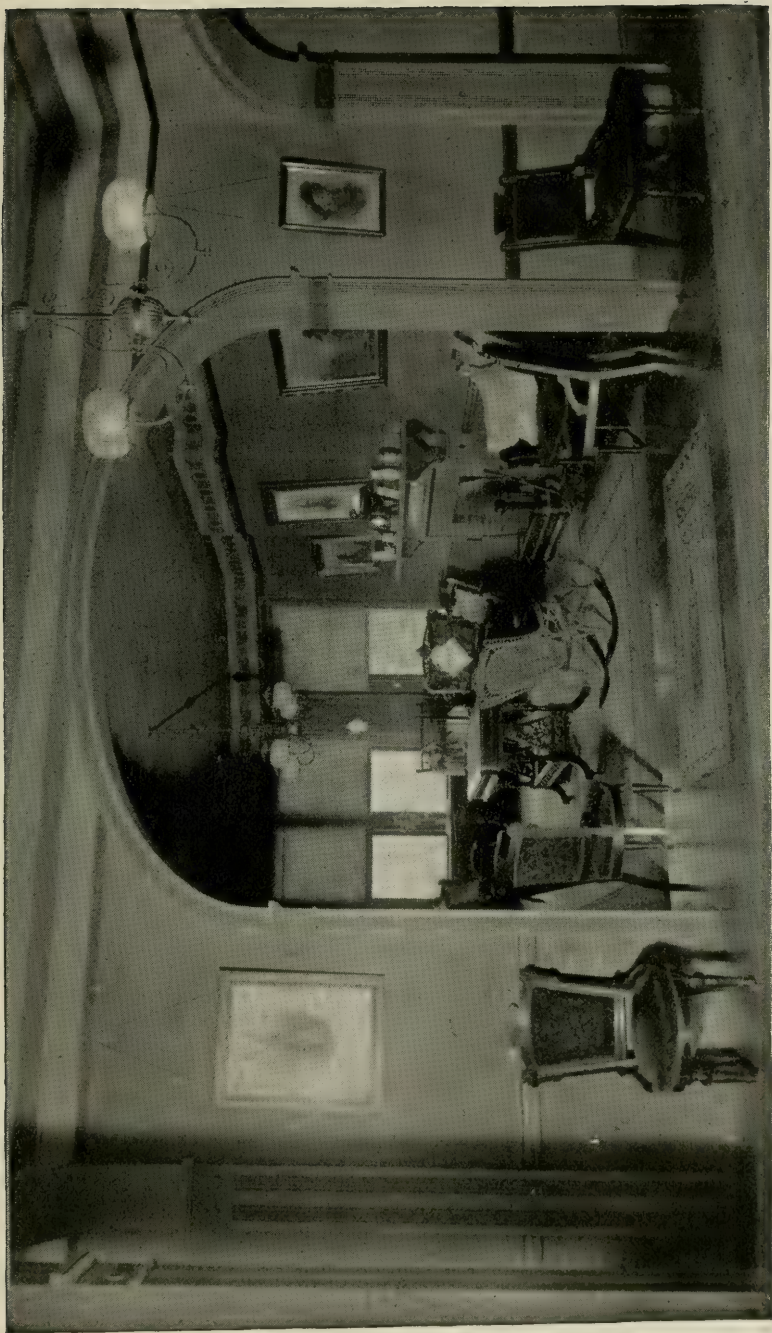
The number of different persons under treatment during the year ending September 30, 1901, was six hundred and seventeen,—two hundred and ninety-nine men, and three hundred and eighteen women. The number of different persons under treatment during the year ending September 30, 1902, was six hundred and seventy,—three hundred and thirty-seven men and three hundred and thirty-three women.

The percentage of recoveries for the year ending September 30, 1901, based upon the number of admissions and excluding all cases of alcohol or opium habit, was 19.19. The percentage of recoveries for the year just closed was 26.92. The recovery rate for the first of these periods, namely, 19.19, was unusually low, but is to be accounted for by the fact that a large majority of the admissions consisted of the chronic and incurable cases. There was an unusually large number of cases of acute alcoholism, all of whom made uneventful recoveries.

These are not included among the recoveries from insanity. A low recovery rate in any one year should not be considered a discouraging indication, for in some years there may be an accumulation of even hopeful cases that are not discharged until the ensuing year, thereby diminishing the recovery rate in one year but augmenting it in the next. Again, in other years a large number of admissions are either incurable or, if deemed curable on admission, prove to be otherwise on longer examination. And still again, as was the case in the year 1901, there may be an unusually large movement of the population, many cases going and coming and a larger proportion than usual removed, prior to any improvement, thereby swelling the number of discharges but diminishing the percentage of recoveries.

During the summer of 1901, for the first time in the history of the hospital, there occurred a case of diphtheria. On the 15th of June a woman suffering from acute mania and quite actively excited was committed to the hospital from the town of Warner. It was subsequently ascertained that several cases of diphtheria had occurred in that town. At the time of admission there were no evidences of the disease about the patient. On the 21st of June, five days after admission, she developed sore throat, and examination disclosed a suspicious looking membrane. A culture of the throat made at the state laboratory revealed the presence of the Klebs-Loeffler bacilli. The patient was immediately isolated and two nurses provided for her. Antitoxin was at once administered to the patient, her nurses, and all other nurses and patients who had come in contact with her. She made a good recovery from the diphtheria July 9, and was at a later date discharged cured of her mental sickness. Her room was thoroughly cleansed with bichloride of mercury, all clothing either burned or fumigated, and the entire department in which she was isolated thoroughly fumigated with formaldehyde by the board of health.

A second woman suffering from a chronic type of insanity was admitted in a state of much excitement on the 11th of July. She was confined in the same apartment as the other



BANCROFT BUILDING — INTERIOR.

case after the quarantine had been removed by the board of health. Nothing occurred until August 3, over three weeks after her admission, when she developed sore throat, and a culture made at the state laboratory showed the presence of the diphtheria bacilli. The same precautions as to isolation, special nurses by day and night, and the use of antitoxin, both for treatment of the patient and immunization of others, were prescribed in this second case. The patient made a good recovery from the diphtheria on the 23d of August. The apartments were carefully cleansed with bichloride of mercury and fumigated with formaldehyde.

On the 7th of October a third patient developed the disease, over six weeks after the recovery of the second case. On the 8th of October a fourth patient presented unmistakable signs of the disease which a culture at the state laboratory established beyond a doubt. These two patients occupied the same apartments as the two previous persons who had recovered, but only a long time after thorough cleansing and disinfection and removal of quarantine by the board of health. The same methods of treatment were carried out in the two last cases. One of the patients was too weak to withstand the depressing effects of the disease and died on the 9th of October. The fourth and last patient made a good recovery from the diphtheria on the 22d of October. At the time cultures were made from the throats of every nurse and patient in the Kent building, nearly sixty persons in all, and no bacilli were found. At the same time cultures were made from scrapings from the cracks in the floor, and the dust in the inlet heat register of the rooms occupied by the infected patients, but with negative results. It was deemed best, however, to remove the floor and every particle of woodwork in the two supposedly infected rooms, and to lay new floors, paint the walls and kalsomine the ceilings. During the past year there has been no reappearance of the disease. With the exception of this small diphtheria epidemic and a single case of typhoid fever in an attendant, the general health of the house has been excellent.

Two conclusions are readily established by this small epidemic: one, the great value of the new state laboratory in the

early detection of infectious disease, and the other, the imperative need of an isolation hospital in connection with a large institution like the New Hampshire State Hospital. In face of the dangers and anxieties attending the appearance of a grave infectious disease in so large an institution it seems almost criminal for the state not to provide a separate detached building for the isolation and treatment of any contagious illness that may occur among the patients at the State Hospital.

The need of an isolation hospital was still further emphasized by the occurrence of a case of typhoid fever in one of the male attendants. The patient was critically ill for many months and eventually recovered. He was removed to the rear ward in the Twitchell house in lieu of any better place. Every precaution was taken to secure isolation and thorough disinfection of all discharges and bed clothing. The proper care of the case among the other patients proved most embarrassing, and added an element of danger that in the future ought to be eliminated by the addition of such a building as will make possible a complete separation of any case of infectious disease.

At the last session of the legislature two laws were enacted which are deserving of notice. By chapter 30 the name of this institution was changed from New Hampshire Asylum for the Insane to New Hampshire State Hospital. The desirability of a change of name and the reasons for such alteration were referred to in the last printed report. It is gratifying, therefore, to record the fact that by its new corporate title state ownership and proprietorship are openly recognized, and still further that by this change of name the fact is emphasized that it is not merely a house of refuge and detention for chronic and incurable patients, but that it is a hospital for the treatment of acute recoverable disease. The remedial character of the institution is thus established and its larger mission at once emphasized. The abandonment of the word "insane" in the title certainly spares the feelings of many who inevitably yet erroneously associate insanity with hopeless incurability or disgrace. Many recent and recoverable cases are often deterred from commitment simply because of the prejudice attaching

to the old superstitions concerning institutions for the insane. As the hospital treatment of mental disease becomes better understood, and as the hospital idea becomes identified with this state institution it is not unlikely that much of this old prejudice will disappear, and that the earlier and more rational treatment of morbid mental states will receive recognition.

By chapter 21 it was provided that criminals pleading insanity may be committed by any justice of the court to the custody of the superintendent of the New Hampshire State Hospital, "to be detained and observed by him until further order of the court, that the truth or falsity of the plea may be ascertained." This law is wise and at times will prove of great value in establishing beyond a doubt the mental status of a doubtful case. It is oftentimes extremely difficult at a few brief examinations in jail to determine whether a prisoner is really insane or a malingerer, but with the perfect facilities for observation both by day and night at the State Hospital the mental status of a doubtful case can be positively determined in a few weeks at most. These doubtful cases are the exceptions to be sure, but the uncertainties and embarrassment attending a miscarriage of justice render it extremely important that the few exceptional cases that do occur should be settled beyond the shadow of a doubt. Last spring one of these very cases occurred and the working of the new law received a test. A man was indicted for rape. The writer was called by counsel to examine the prisoner in jail. Malingering was suspected, but on so grave a charge it seemed very important that more careful examination should be made than was possible in the jail, where the prisoner for a brief time was able to carefully guard himself against every attempt at examination. He was transferred to the State Hospital awaiting the next term of court. Long before the sitting of the court his mental responsibility was fully determined, and at the next term he received a state prison sentence. A shrewd malingerer can occasionally simulate morbid mental states for very brief periods, but no person, however skilled in dissimulation he may be, can for days and nights together successfully act the part of an insane person.

Two years ago the prolonged drouth reduced the hay crop to twenty tons, and it became necessary to purchase hay for the horses and cattle. The water in the spring also proved inadequate to the demands of the household, and the city water was used on several occasions. The past two summers there was such an abundance of rain that the hay crop was much more plentiful, and the water in the spring rose to its height in former years. It was not necessary during the past year to purchase water. It was deemed advisable during the past summer to purchase thirty tons of standing grass.

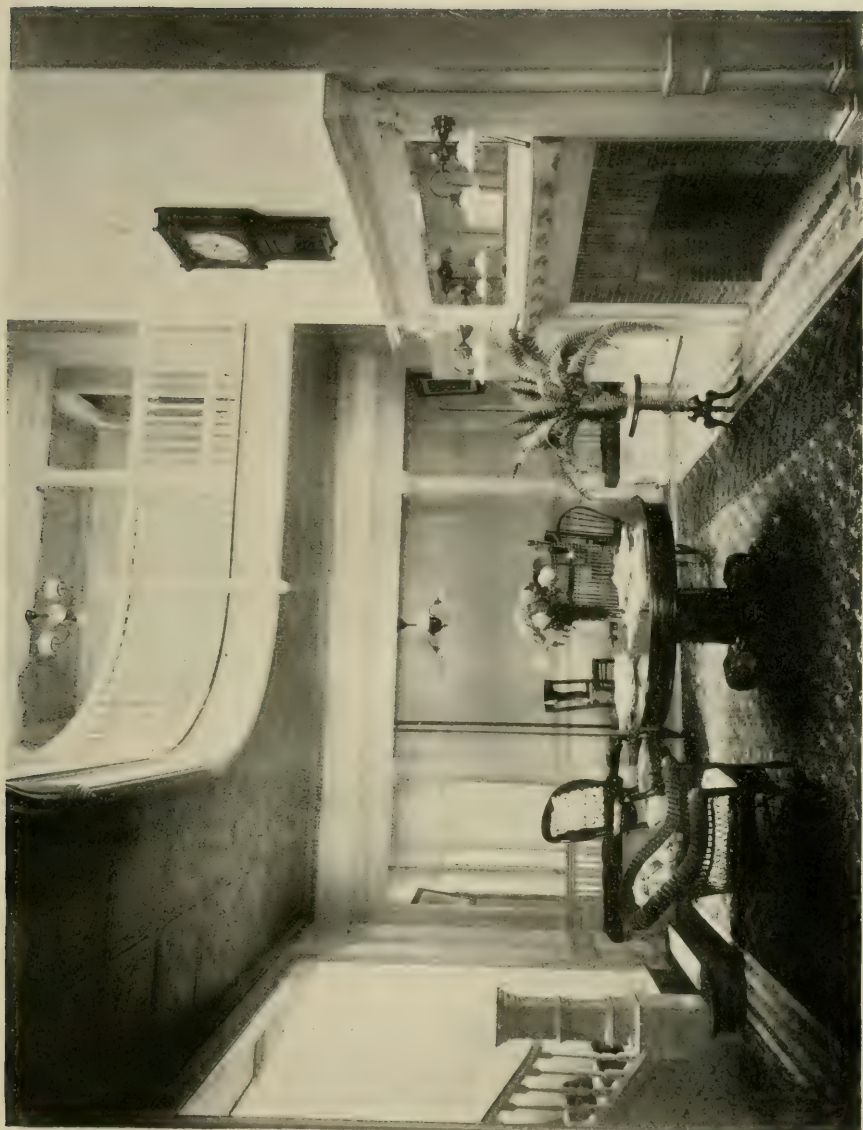
THE TRAINING SCHOOL FOR NURSES.

The eleventh class graduated in June, 1901; the twelfth class graduated in June, 1902. The graduating exercises were held in the chapel with a reception following at the Nurses' Home. Interesting addresses were delivered on these two occasions by Hon. G. Byron Chandler of Manchester and by Dr. J. Milnor Coit of St. Paul's School, Concord. Both of these addresses may be found in the Appendix.

The efficiency of the school has been materially increased by its connection with the District Nursing Association of Concord. By arrangements made between this organization and the State Hospital each nurse in the training school devotes six weeks of her service to district nursing in the city. She is called to attend upon all sorts of minor accidents, and a great variety of sickness as well as obstetric cases. The practical experience, under the direction of a trained graduate, that she thus derives is an admirable supplement to her work in the hospital. It throws her upon her own resources, broadens her character and judgment, teaches her how to meet unusual emergencies, and to quickly adapt herself to rapidly changing conditions. The graduates of our school now are not only equipped with a practical experience in mental and nervous disease, but acquire also familiarity with a great variety of general sickness and that, too, in the homes of the poor where the conditions test far more surely the qualifications of a nurse for her work than do the well-equipped wards of the hospital.



NURSES' HOME.



NURSES' HOME — INTERIOR.

Thus far the relationship between the association and the training school has been mutually satisfactory. The association has obtained an extra nurse at slight expense, and the nurses in the school have derived valuable experience. The hospital will in its turn obtain a better service, for everything which broadens the intelligence of the nurse is sure to increase her usefulness. The hospital furnishes the nurse to the association, boards and lodges her, and takes care of her laundry; the association pays the hospital four dollars a week for her services, maintains a telephone in the Nurses' Home, and pays the hospital for all surgical and medical supplies furnished.

The medical work in the various wards has been prosecuted with great zeal by Drs. Hills and Walker. Their reports of the service on their respective wards will be found in the Appendix. Especially noteworthy is the open-air treatment of insanity during the summer months. The quiet and greater cleanliness of the chronic insane, and especially the absence of epidemic sickness, has been largely due, I believe, to the greater number of hours spent by the patients in the open air.

Both of the summer cottages have been occupied all through the spring, summer, and fall months. Many patients have completed their convalescence there and returned to their homes recovered.

PERMANENT IMPROVEMENTS.

During the past two years the permanent improvements have been chiefly such additions and alterations as were provided for by the legislative appropriation of 1900, together with many renewals of floors, rooms, and plumbing, rendered necessary by the new work. When the new iron stairway was placed in the old laundry building new floors and new rooms were provided in the second floor for the kitchen employees. The erection of the brick elevator shaft in the Rumford wing offered a favorable opportunity for the finishing of a serving room on each floor with porcelain sinks and china closets in the rooms formerly occupied by the nurses. Similarly in the Chandler and Kimball wings, upon the completion of the brick elevator shaft, the two dining rooms on each floor have been thrown into one,

pantry sinks provided, and larger, lighter, and better dining rooms secured. The work of putting in the elevator wells has progressed very slowly, owing to the fact that only one shaft could be erected at a time. This improvement is most timely from every point of view, both for safety against fire and sanitary reasons.

The new farmer's cottage was finished and occupied in the fall of 1901.

New floors and new plumbing have been placed in the administration building.

New floors and steel ceilings have been laid in wards one and two of the Kent building.

The stable and engineer's house have been connected with the boiler-house, so that the heating of the entire hospital, with the exception of the farmer's and gardener's houses, is furnished from the central boiler plant. At the same time the piping over the boilers has been remodeled and re-covered and high pressure substituted for low pressure steam at the boilers, the reduction for heating being accomplished at the various buildings and wings. It is believed that by the use of high pressure steam alone at the boilers quite an economy in fuel consumption will be attained.

New plumbing has been placed in the third floor of the Bancroft building. In the first floor the dining-room has been enlarged by the addition of another room with porcelain pantry sink and china closet.

The new bakery was completed last fall, and with its new oven, excellent light, and fine storage room for flour has proved a most welcome relief from the crowded condition in the old bakery.

The old baker's oven will be shortly replaced by a new meat oven for the kitchen.

THE PRESENT NEEDS AND FUTURE MISSION OF THE NEW HAMPSHIRE STATE HOSPITAL.

Any consideration of the present needs of this institution meets with embarrassment from the fact that this state has

as yet adopted no definite policy of care for its dependent insane. Enlargements of the hospital are almost imperative. There is urgent need of increased accommodations for the chronic insane. For very safety an isolation hospital is needed. Proper facilities for classification of the acute cases, for classification and employment of the criminal insane, are desired. But when actual construction along any one of these lines is contemplated we are at once confronted with the fact that the state itself has no clearly defined policy as to its present and future duty toward its dependent insane. Although additional wings are almost imperative, their actual construction is delayed because of the uncertainty as to whether this institution may be called upon to care for a large or small number of any special class.

Nearly all civilized communities have recognized the fact that the state is the smallest unit that can advantageously, for either humane or economical reasons, care for its dependent insane. The theory of state care rests on the humane principle that insanity is disease; that it is a disease requiring careful, constant medical supervision and nursing; that even in its chronic and incurable phases it is still disease, and as such requires the medical supervision that a hospital alone affords. Assuming this more humane and enlightened conception of insanity to be true, it follows that a properly equipped hospital is only possible under the more resourceful guidance of the state itself.

Classification of the various types of insanity is a *sine qua non* in the hospital care of the disease, and this cannot be properly carried out in the small institution. With larger numbers more complete classification is possible. Moreover, cost of maintenance diminishes in proportion to increase in numbers. It is more economical to care for many than for a limited number. One thousand patients can be cared for at a less per capita weekly cost than five hundred. Among one thousand patients the facilities for proper classification will be far greater than among five hundred. In the larger institutions there will be a sufficient number of each class of mental disease

to warrant the erection of special wards or buildings for each one of the salient types of insanity. The acute, curable patients will be provided with a special building removed from others more objectionable. The convalescent patients will have their own building. The noisy and demented will be properly assigned to quarters removed from the classes just mentioned. The criminal insane will have their own apartments with facilities for supervision and employment adapted to their requirements. Such classification and care are not possible for financial reasons in the small town or county institution, and for this and other reasons town and county care of the dependent insane is rapidly being replaced in this and other countries by the more comprehensive, humane, and in the end more economical system of state care.

Admitting state care to be the true method of maintaining the dependent insane, the future growth of this institution becomes a simple business proposition. Under this system all new construction would conform to a definite plan which experience has demonstrated as best fitted for the proper care of mental disease. A manufacturing corporation, in anticipating its future expansion, would carefully consider the demands of its business and would erect such buildings as time and experience had shown to be necessary to the proper growth of its industry. Similarly the state, with a clearly defined policy of state care for its dependent insane, would look into the future and intelligently make such additions as experience had demonstrated to be best adapted to the proper treatment of insanity. Needless expenditure and short-sighted construction under such conditions would not occur.

It is earnestly believed by many that state care is to be realized in this as in other states in the no distant future. Such additions and enlargements as are made at this hospital should therefore have reference to the probable future expansion of this institution along the line of state care. Immediate needs should conform to a future contingent policy of state care.

With these facts in mind it will be found that enlargement should take place in two directions. There should be a

detached hospital building for the care of the recent and acute insane, as well as the sick in bed. Such structure should be provided with isolation wards for the proper treatment of cases of contagious and infectious disease. There should also be thrown out from the present buildings, at some suitable point, two wings, one on the women's and one on the men's side, for the care of the feeble demented insane. With these additions the hospital would be well provided with accommodations for such cases as the state board of lunacy might send, and would also be equipped with the facilities for a suitable classification of patients.

A visit to the leading English and Scotch asylums confirmed the views which have been discussed before this board at its annual meetings. It was especially gratifying to me to see the hospital idea practically realized in many of the Scotch asylums in the care of the acute insane. Several of these institutions had separate one-story hospital buildings provided with every facility for the examination and treatment of acute insanity. Broad, sunny wards where the patient could be cared for in bed, quiet, retired single rooms for those needing such separation, and all so far removed from the sight and sound of the chronic insane that detrimental impressions were reduced to a minimum. First impressions are everything, and many a case of recent insanity receives a violent and harmful shock from association upon admission with objectionable types of insanity.

Such a building should in our climate consist of two stories, should be provided with a few single rooms, with broad, sunny wards, and with facilities for physical examination and hydrotherapeutic treatment. On one floor the sick in bed could be cared for and the other floor could be reserved entirely as a reception ward, those cases that are recent and curable being retained there for treatment, while the incurable cases would be transferred to their proper ward in the main building. Such a building need not be large. Accommodations for twenty-five to thirty of each class on either floor would be ample. In immediate connection with this building should be an isolation ward for the separation of contagious diseases.

Another argument in favor of a detached hospital building for the acute, the feeble, and sick insane is the desirability of employing women nurses for the care of all patients of this class, whether male or female. With the present meager facilities it is not possible to employ women nurses in the male side of the hospital. I am thoroughly satisfied, however, that perfect care of the feeble and sick male patients, as well as the recent cases of acute insanity among men will never be realized until there is a hospital building, the nursing management of which is placed in the hands of women. Women properly trained possess a facility and aptitude for the care of mental and physical sickness that are rarely attained by men. Not only would the housekeeping service in the sick wards be more efficient under the guidance of women nurses, but the details of nursing would be more effectively realized. The moral effect of women nurses in the sick ward would be a stimulus and a source of restraint upon men patients. In these and countless other ways I am satisfied that a hospital building for the acute, feeble, and sick insane would do more to elevate and perfect the efficiency of this hospital than any other agency that could be suggested. Here, again, we are confronted with the fact that this state has no settled policy of care. It is useless to erect buildings unless there is absolute certainty of future maintenance.

The other addition referred to is a two-story wing projected from the Rumford and Chandler wings respectively. The lower floor could be used as a day room and the second floor as a dormitory. This construction admits of having windows on both sides, affording plenty of light and air, besides facilitating supervision and attendance. In these wards the majority of the feeble demented insane could be cared for. The day room on the ground floor admits of easy egress and ingress. The large dormitory, under special night supervision, facilitates the care of such patients as are untidy and need special attention.

The enlargements referred to can easily be administered from the present main building. Such additions can be lighted

and heated, the food cooked, and the clothing laundered in the service departments of the present plant. This materially diminishes the first cost of construction, as well as the subsequent cost of maintenance. As before stated, whether state care of all the insane is realized or not, these additions are a step in the right direction, are directly in line with what is being done elsewhere, and, should state care become the established policy in New Hampshire, they would form the natural links in the chain of normal growth. It is to be earnestly hoped that the plans for new construction that have been prepared by your committee will meet with your approbation and that measures may be taken for presenting the necessity of their realization to the next legislature.

Such a wing on either side would have been of inestimable value to us during the past year, when fifty-three patients were transferred to our care from the Merrimack county farm on account of the recent destruction of their main building by fire. The sudden arrival of so many patients strained our capacity for the time being, but the characteristics of the new patients were soon so far determined that they were classified without material discomfort to other patients. Fortunately the occupancy of the Nurses' Home had left at our disposal many rooms formerly used by the nurses, so that by a few additional dormitory beds we were able to meet the emergency.

That enlargements are imperative is evident from the embarrassment already experienced in providing remedial treatment for all patients actually requiring it. In their last report the board of lunacy calls attention to the fact that "the amount now annually appropriated for the remedial treatment of the indigent insane, who may be committed to the New Hampshire Asylum for the Insane by order of the board of commissioners of lunacy, is \$16,000. The gradual increase in the number of applicants for remedial treatment makes it improbable that this sum will much longer be sufficient; indeed, at the present time, in order to keep within the appropriation, we are obliged to discharge patients earlier than is advisable. It is not improbable that in the very near future a larger appropri-

ation will be required if justice is to be done those who are entitled to remedial treatment under the law."

The stairways in the Fisk, Rumford, and Chandler wings are entirely worn out and are in a dangerous condition. When these are renewed another room should be taken in each ward in the three wings, and large fireproof iron stairways replace the old, unsafe wooden ones. Such stairways will cost \$7,497. The first cost is of course much larger than a wooden staircase. The additional outlay ought not to be considered in providing safe, permanent exits for patients, many of whom are infirm. The state ought not to evade any sanitary or fireproof construction that will contribute to the safety and health of the inmates of its hospital. I believe the necessity for these iron stairways is imperative, and that longer delay in their construction would be an almost criminal oversight.

Another renewal urgently demanded is the plumbing of the toilet rooms of the Peaslee building. All the toilet and bath-rooms of the hospital are in very good condition, with the exception of these three rooms. The present toilet apartments in the Peaslee wing are inside rooms without outside windows, are dark, and the floor timbers are badly decayed. The furnishing of three new toilet rooms with modern plumbing appliances, proper ventilation, and new waterproof floors would cost approximately \$599.

To summarize the present requirements of the hospital necessary for the maintenance of the property of the state, as well as the preservation of the health and safety of its inmates, I submit the following itemized statement with estimate of probable cost:

New two-story extension from the Rumford wing	\$15,000.00
New two-story extension from the Chandler wing	33,000.00
House furnishings for same.....	2,736.80
Four iron fireproof stairways in the Fisk, Rumford, Chandler, and Peaslee wings.....	7,497.00
New toilet rooms with proper fixtures for the Peaslee building	599.00
Total	<hr/> \$58,832.80

Concerning the two-story extensions from the Rumford and Chandler wings, I would say that these additions are most imperative to prevent overcrowding, as well as to maintain proper care and preserve the health of the chronic demented insane. Moreover, such additions would be equally desirable should state care of the insane become adopted in New Hampshire.

The hospital buildings already referred to, though extremely necessary, can perhaps be better deferred until the completion of the extensions, the stairways, and the plumbing. I firmly believe, however, that the remedial equipment of this hospital will never be complete until the hospital buildings previously described are erected.

ACKNOWLEDGMENTS.

By the death of Rev. Father Barry this institution has lost a warm friend and wise counselor. His cheery visits were always a consolation to many patients. During the years of his official connection with the hospital he not only comforted those patients whom he visited, but by his wise and considerate consolation to the friends and relatives did much to lighten their burden.

Dr. A. E. Brownrigg left the hospital in October to assume charge of the Highland Spring Sanitarium at Nashua. His service at this institution has been eminently satisfactory. He was not only a faithful, efficient officer, but he was a student as well, and his contributions on psychiatry and kindred medical subjects were extremely creditable and deserving of the favorable recognition they received.

By the death of Mr. John H. Carr the hospital lost a faithful servant. For thirty-six years he labored continuously at this institution. Coming here at the age of nineteen as an attendant, he devoted himself to his work with such enthusiasm and faithfulness that he soon won the confidence of the management and was promoted to the position of supervisor and later to that of steward and clerk. In this latter capacity he conducted the affairs of his department with singular zeal and integrity. He had a most abiding sense of duty and, in spite of serious illness, labored unremittingly at his post until compelled by sheer exhaustion to yield.

The resignation of Mrs. J. H. Carr as matron followed the death of her husband. It is a pleasure to testify to Mrs. Carr's many years of faithful loyal service in this hospital. She has served in every department of the institution, being at various times supervisor, head cook, head laundress, and finally house-keeper, and in every capacity giving the hospital freely the benefit of her most excellent judgment and unremitting energy. Such a record of long, continuous service in institution work is almost unparalleled.

The position of second assistant physician has been most acceptably filled by Dr. C. S. Walker. Mr. and Mrs. A. F. Tandy have been promoted to the vacancies caused by the death of Mr. Carr and the resignation of Mrs. Carr.

Col. J. H. Linehan, Rev. L. W. Buckshorn, and S. C. Eastman kindly gave illustrated lectures to the patients on different evenings.

Rev. Mr. Himes and Dr. William Varick gave periodicals.

Mrs. A. Brown Blanchard, the first superintendent of the training school, very kindly presented the Nurses' Home with an enlarged platinotype photograph of herself, which pleasingly recalls her connection with the school in its early days.

The writer feels especially indebted to Mr. W. F. Thayer, who kindly consented to assume the duties of treasurer, and to Dr. F. L. Hills, who judiciously conducted the affairs of the hospital during his absence.

The loyal support of the trustees and your freely accorded permission for a four months' vacation are sincerely appreciated by the superintendent.

CHARLES P. BANCROFT.

CONCORD, N. H., November 20, 1902.

STATISTICAL TABLES FOR YEAR ENDING SEPTEMBER 30, 1901.

TABLE I.

	Men.	Women.	Total.
Patients in hospital October 1, 1900.....	203	222	425
Cases admitted during the year.....	101	101	202
Discharged within the year.....	71	73	144
" as recovered from first attack.....	9	14	23
" as recovered from other than first attack.....	3	11	14
" as recovered from alcoholism.....	15	.....	15
" as much improved.....	15	23	38
" as improved.....	8	10	18
" as not improved.....	15	16	31
" as not insane.....	1	.....	1
Absconded.....	4	.....	4
Deaths.....	27	22	49
Patients remaining October 1, 1901.....	206	228	434
Number of different persons under treatment during the year.....	299	318	617
Number of different persons admitted.....	98	101	199
Number of different persons recovered.....	26	25	51
Daily average number of patients.....	203.12	222.53	425.65

TABLE II.

Showing the results in all under treatment during the year.

	Of those in the hospital at the beginning of the year.			Of those admitted during the year.			Total of both classes.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Discharged recovered.....	5	13	18	7	12	19	12	25	37
" much improv'd.....	9	8	17	6	15	21	15	23	38
" improved.....	2	5	7	6	5	11	8	10	18
" not improved.....	9	11	20	6	5	11	15	16	31
" alcoholism.....	2	.....	2	13	.....	13	15	.....	15
" absconded.....	1	.....	1	3	.....	3	4	.....	4
" not insane.....	.....	.....	.....	1	.....	1	1	.....	1
Deaths.....	15	14	29	12	8	20	27	22	49
Remaining improved.....	95	98	193	27	34	61	122	132	254
Remaining not improved....	63	72	135	21	24	45	84	96	180

TABLE III.

Admissions and discharges from the beginning of the hospital.

	Men.	Women.	Total.
Admitted	3,845	3,632	7,477
Discharged	3,639	3,355	6,994
" recovered	1,156	1,140	2,296
" improved	867	837	1,704
" not improved	765	738	1,503
" not insane	23	16	39
" unknown	76	13	89
Died	754	630	1,384

TABLE IV.

Showing number and character of those recovered during the year.

	Cases in which recurrence is established.			Cases in which recurrence is not established.			Total of both classes.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
From first attack				20	14	35	20	14	34
From second attack				2	2	4	2	2	4
From third attack	3		3		1	1	3	1	4
From fourth attack	2	4	6		1	1	2	5	7
From fifth attack		2	2					2	2
From seventh attack		1	1					1	1
Total	5	7	12	23	18	41	27	25	52

TABLE V.

Showing duration of insanity in those recovered during the year.

	Men.	Women.	Total.
One to three months	18	10	28
Three to four months			
Four to six months	2	3	5
Six to twelve months	5	5	10
More than one year	2	7	9
Total	27	25	52

TABLE VI.

Showing number of admissions in this asylum in those admitted during the year.

	Men.	Women.	Total.
Admitted the first time.....	81	69	150
“ second time.....	9	23	32
“ third time.....	6	3	9
“ fourth time.....	2	3	5
“ fifth time.....	2	2	4
“ seventh time.....	1		1
“ tenth time.....		1	1
Total.....	101	101	202

TABLE VII.

Showing number of the attack in those admitted during the year.

	Men.	Women.	Total.
First.....	76	73	149
Second.....	12	15	27
Third.....	7	5	12
Fourth.....	3	2	5
Fifth.....	2	4	6
Sixth.....		1	1
Seventh.....	1		1
Tenth.....		1	1
Total.....	101	101	202

TABLE VIII.

Showing duration of insanity in those admitted during the year.

	Men.	Women.	Total.
Less than one month.....	32	27	59
One to three months.....	10	16	26
Three to six months.....	8	6	14
Six to nine months.....	11	7	18
Nine to twelve months.....	5	5	10
Twelve to eighteen months.....	4	7	11
Eighteen months to two years.....	3	3	6
Two years to three years.....	5	6	11
Three to four years.....	5	4	9
Four to five years.....	2	4	6
Five to ten years.....	8	3	11
Ten to fifteen years.....	3	3	6
Fifteen to twenty years.....		3	3
Twenty to thirty years.....		6	6
Unknown.....	5	1	6
Total.....	101	101	202

TABLE IX.

Showing ages of those admitted during the year.

	Men.	Women.	Total.
From ten to fifteen years.....		1	1
Fifteen to twenty years.....	4	1	5
Twenty to twenty-five years.....	9	6	15
Twenty-five to thirty years.....	10	7	17
Thirty to thirty-five years.....	11	14	25
Thirty-five to forty years.....	18	17	35
Forty to forty-five years.....	14	13	27
Forty-five to fifty years.....	7	7	14
Fifty to sixty years.....	14	17	31
Sixty to seventy years.....	7	9	16
Seventy to eighty years.....	3	8	11
Over eighty years.....	4	1	5
Total.....	101	101	202

TABLE X.

Showing forms of disease in those admitted during the year.

	Men.	Women.	Total.
Acute mania.....	7	19	26
Sub-acute mania.....	3	3	6
Recurrent mania.....	3	4	7
Chronic mania.....	1	1	2
Epileptic mania.....		2	2
Acute melancholia.....	18	20	38
Sub-acute melancholia.....	1	2	3
Recurrent melancholia.....		2	2
Circular insanity.....	2	1	3
Acute confusional insanity.....	4	3	7
Adolescent insanity.....	1		1
Dementia precox.....	3	1	4
Senile dementia.....	6	7	13
Chronic dementia.....	4	14	18
Epileptic dementia.....	1	1	2
Paresis.....	9	1	10
Organic brain disease.....	3	2	5
Chronic delusional insanity.....	9	11	20
Paranoia.....	2	2	4
Congenital imbecility.....	6	3	9
Epilepsy.....	1		1
Hypochondriasis.....	2	2	4
Acute alcoholism.....	13		13
Morphinism.....	1		1
Not insane.....	1		1
Total.....	101	101	202

TABLE XI.

Showing complications in those admitted during the year.

	Men.	Women.	Total.
Heredity.....	27	35	62
Intemperance.....	21	1	22
Menopause.....		5	5
Morphinism.....	3	1	4
Masturbation.....	4	1	5
Uterine disease.....		2	2
Kidney disease.....		1	1
Apoplexy.....	1		1
Blow on head.....	2		2
La grippe.....	3	1	4
Rheumatism.....		2	2
Tuberculosis.....	1		1
Fracture forearm.....		1	1
Poor health.....		3	3
Neurasthenia.....		1	1
Inflammation of the ear.....	1		1
Total.....	63	54	117

TABLE XII.

Showing number with suicidal propensity under treatment during the year.

	Men.	Women.	Total.
Of those in hospital at the beginning of the year.....	12	35	47
Of those admitted during the year.....	17	25	42
Total.....	29	60	89

TABLE XIII.

Showing civil condition of those admitted during the year.

	Men.	Women.	Total.
Married.....	43	50	93
Single.....	45	26	71
Widowed.....	11	21	32
Divorced.....	2	4	6
Total.....	101	101	202

TABLE XIV.

Showing occupation of those admitted during the year.

	Men.	Women.	Total.
Baker	1		1
Barber	3		3
Book agent	1		1
Carpenter	1		1
Clerk	4		4
Cook	1		1
Domestic		15	15
Dressmaker		1	1
Drummer	1		1
Expressman	1		1
Farmer	26		26
Gardener	1		1
Hotel keeper	1		1
Hostler	1		1
Housewife		63	63
Insurance agent	2		2
Laborer	16		16
Liquor seller	2		2
Mason	2		2
Merchant	4		4
Machinist	2		2
Mill operative	7		7
Milliner		1	1
Moulder	1		1
No occupation	3	8	11
Nurse		2	2
Pianist		1	1
Polisher	1		1
Peddler	2		2
Physician	2		2
Printer	3		3
Real estate agent	1		1
Riveter	1		1
Sale-man	1		1
Shoemaker	3		3
Sectionhand	1		1
Sister of Mercy		1	1
Stenographer		1	1
Teamster	1		1
Tramp	1		1
Typesetter		1	1
Unknown	1		1
Weaver	1		1
Yeastmaker	1		1
Total	101	101	202

TABLE XV.

Showing nativity of those admitted during the year.

	Men.	Women.	Total.
New Hampshire.....	71	52	123
Vermont.....	2	6	8
Maine.....	1	4	5
Massachusetts.....	5	6	11
Connecticut.....	1	1	2
New York.....	3		3
Wisconsin.....		1	1
North Carolina.....		1	1
California.....	1		1
Canada.....	8	10	18
Ireland.....	2	10	12
England.....	4	5	9
Sweden.....		3	3
Russia.....		1	1
Finland.....	1		1
New South Wales.....	1		1
Scotland.....	1		1
Italy.....		1	1
Total.....	101	101	202

TABLE XVI.

Showing residence of those admitted during the year.

	Men.	Women.	Total.
Hillsborough county.....	19	26	45
Merrimack county.....	23	23	46
Cheshire county.....	6	6	12
Rockingham county.....	9	6	15
Strafford county.....	16	11	27
Grafton county.....	7	11	18
Sullivan county.....	6	6	12
Belknap county.....	8	2	10
Carroll county.....	5	6	11
Coos county.....	2	2	4
Vermont.....		1	1
Massachusetts.....		1	1
Total.....	101	101	202

TABLE XVII.

Showing by what authority committed.

	Men.	Women.	Total.
By friends.....	58	67	125
By self.....	2		2
By state commission of lunacy.....	3	1	4
By county.....	25	20	45
By town or city.....	9	11	20
By court.....	4	2	6
Total.....	101	101	202

TABLE XVIII.

Showing by whom supported.

	Men.	Women.	Total.
Self or friends.....	52	53	110
Counties.....	18	9	27
Towns or cities.....	3	5	8
State, including cases sent by supreme court, by order of the governor, and by the commission of lunacy.....	28	29	57
Total.....	101	101	202

TABLE XIX.

Deaths during the year and their causes.

	Men.	Women.	Total.
Apoplexy.....	1	1	2
Acute delirium.....		1	1
Acute bronchitis.....		1	1
Chronic melancholia.....	1		1
Chronic melancholia and anæmia.....		1	1
Congestion of the lungs.....		1	1
Diabetes coma.....		1	1
Endocarditis.....	1		1
Emphysema and heart disease.....	1		1
Epilepsy.....		3	3
Exhaustion from chronic dementia.....	6	1	7
Exhaustion from senile dementia.....	1		1
Exhaustion from katatonia.....	5	2	7
Paresis.....	1		1
Pneumonia.....	1		1
Perforating ulcer of stomach.....	1		1
Phthisis.....	2		2
Organic brain disease.....	2	2	4
Organic heart disease.....		2	2
Exhaustion from acute diarrhea.....	2	1	3
Exhaustion from chronic diarrhea.....		1	1
Rupture of coronary sinus.....		1	1
Septicæmia.....	1		1
Suicide by hanging.....		1	1
Tuberculosis of lungs and kidneys.....	1		1
Uræmia and dilated heart.....	1	1	2
Total.....	27	22	49

TABLE XX.

Showing ages at time of death.

	Men.	Women.	Total.
Between twenty and thirty years old.....	3	2	5
“ thirty and forty years old	3	2	5
“ forty and fifty years old.....	2	5	7
“ fifty and sixty years old.....	4	4	8
“ sixty and seventy years old.....	5	4	9
“ seventy and eighty years old.....	6	4	10
“ eighty and ninety years old	2	1	3
Over ninety years old.....	2	.....	2
Total	27	22	49

TABLE XXI.

Showing ages of those remaining at the end of the year.

	Men.	Women.	Total.
Under twenty years of age.....	4	2	6
Twenty to thirty years of age	34	17	51
Thirty to forty years of age.....	39	42	81
Forty to fifty years of age	41	51	92
Fifty to sixty years of age	39	55	94
Sixty to seventy years of age.....	34	39	73
Seventy to eighty years of age.....	10	17	27
Over eighty years of age.....	5	5	10
Total.....	206	228	434

TABLE XXII.

Showing duration of disease in those remaining at the end of the year.

	Men.	Women.	Total.
From one to three months.....	10	6	16
From three to six months.....	5	7	12
From six to nine months.....	9	4	13
From nine to twelve months.....	2	4	6
From twelve to eighteen months.....	11	17	28
From eighteen months to two years.....	8	7	15
From two to three years	15	16	31
From three to four years	14	12	26
From four to five years	5	13	18
From five to ten years	29	46	75
From ten to fifteen years	18	27	45
From fifteen to twenty years	23	16	39
From twenty to twenty-five years.....	11	21	32
From twenty-five to thirty years.....	5	12	17
From thirty to forty years	15	9	24
Over forty years	9	9	18
Unknown.....	17	2	19
Total.....	206	226	434

TABLE XXIII.

Showing prospects of recovery in those admitted during the year.

	Men.	Women.	Total.
Curable (apparently).....	50	52	102
Incurable (apparently)	50	49	99
Not insane.....	1	.....	1
Total	101	101	202

TABLE XXIV.

Prospect of those remaining at the end of the year.

	Men.	Women.	Total.
Curable (apparently).....	28	48	76
Incurable (apparently).....	178	180	358
Total.....	206	228	434

TABLE XXV.

Statistics of admissions, discharges, and deaths from the opening of the hospital.

Year.	Admitted.	Discharged and died.	Recovered.	Improved.	Unimproved.	Died.	Whole number under treatment.	Remaining at end of hospital year.	Daily averages of the hospital.		
									Men.	Women.	Total.
1843	76	29	12	10	6	1	76	47	.....	.....	.....
1844	104	81	37	20	19	5	151	70	.....	.....	.....
1845	88	82	37	17	22	6	158	76	.....	.....	.....
1846	98	76	26	23	16	11	174	98	.....	.....	.....
1847	89	87	38	17	23	9	187	100	.....	.....	.....
1848	92	83	29	20	26	8	192	109	.....	.....	.....
1849	81	76	36	15	11	14	190	114	.....	.....	.....
1850	103	90	45	18	20	7	217	127	.....	.....	.....
1851	88	98	45	25	16	12	215	117	.....	.....	.....
1852	167	106	66	13	16	11	224	118	.....	.....	.....
1853	132	107	65	25	11	8	250	143	.....	.....	.....
1854	141	123	63	24	22	14	284	161	.....	.....	.....
1855	95	91	50	20	9	12	246	155	.....	.....	.....
1856	85	96	66	13	7	10	250	154	.....	.....	.....
1857	97	81	47	15	7	12	251	170	.....	.....	.....
1858	76	77	34	20	6	18	246	169	.....	.....	.....
1859	98	85	31	22	18	14	267	182	.....	.....	.....
1860	85	83	38	16	12	17	267	184	94.0	88.0	182.0
1861	106	94	34	34	10	16	290	196	90.0	100.0	190.0
1862	86	94	42	32	7	13	282	188	88.7	105.7	101.4
1863	101	85	30	32	17	16	289	204	87.4	105.9	193.3
1864	105	92	36	16	17	23	309	217	99.4	107.4	206.8
1865	107	102	42	23	14	22	324	223	102.5	115.9	218.4
1866	104	91	26	28	16	21	327	236	106.3	122.6	228.9
1867	117	107	39	24	27	17	353	246	119.3	122.6	241.9
1868	118	129	51	39	18	21	364	235	118.5	121.27	239.77
1869	95	93	42	20	9	22	330	237	113.7	129.9	243.6
1870	130	114	37	34	20	23	367	253	123.1	125.9	249.0
1871	135	163	65	37	29	32	388	225	119.8	123.44	242.82
1872	152	123	55	31	16	21	377	254	169.36	125.19	234.55
1873	194	172	61	51	27	33	448	273	127.8	139.5	267.3
1874	140	137	42	44	27	22	416	281	140.4	127.5	267.9
1875	120	140	53	37	30	20	401	261	136.6	138.1	274.7
1876	140	122	35	34	27	26	401	279	121.4	139.1	260.5
1877	119	118	36	38	27	17	398	280	124.2	150.3	274.5
1878	114	118	35	36	30	17	394	276	128.9	143.8	272.7
1879	73	81	27	23	8	23	340	268	126.3	143.8	270.1
1880	111	94	28	27	22	17	379	285	127.4	147.6	275.0
1881	134	117	33	39	23	22	419	302	133.3	158.6	291.9
1882	104	121	38	26	27	30	406	285	131.0	159.1	290.1
1883	133	123	41	23	34	25	418	296	120.3	164.1	284.4
1884	141	127	18	41	44	24	436	309	124.3	169.6	293.8
1885	138	122	30	20	36	36	447	322	128.3	181.9	310.2
1886	138	143	43	30	34	34	460	317	139.82	182.37	322.19
1887	143	128	32	28	28	33	460	328	137.22	184.12	321.34
1888	137	125	33	26	35	28	465	339	150.49	183.69	334.08
1889	155	158	41	38	34	36	494	337	161.06	175.80	336.86
1890	276	223	79	28	63	53	602	364	166.52	184.67	351.09
1891	173	165	42	40	37	38	527	372	175.62	184.99	360.61
1892	169	181	51	39	40	42	531	359	181.40	182.38	363.78
1893	166	154	47	35	34	37	508	368	183.72	193.63	369.02
1894	187	152	52	33	27	35	542	402	190.14	193.35	383.49
1895	175	165	55	45	27	36	566	414	199.57	204.79	404.36
1896	181	171	42	44	34	40	586	422	201.31	210.65	411.96
1897	147	147	38	30	30	36	561	422	210.26	214.60	424.86
1898	150	163	46	40	34	33	567	409	201.93	210.71	412.64
1899	179	161	48	26	34	39	577	427	202.38	220.88	423.26
1900	149	151	37	37	26	49	568	425	198.42	221.71	420.13
1901	202	193	47	54	31	49	617	434	203.12	222.53	425.65

STATISTICAL TABLES FOR YEAR ENDING SEPTEMBER 30, 1902.

TABLE I.

	Men.	Women.	Total.
Patients in hospital October 1, 1901	206	228	434
Cases admitted during the year	135	112	247
Discharged within the year	87	74	161
" as recovered from first attack	23	18	41
" as recovered from other than first attack	8	14	22
" as recovered from alcoholism	11	1	12
" as recovered from morphinism	22	1	23
" as much improved	7	17	24
" as improved	11	7	18
" as not improved	11	14	25
Not insane	1	1	2
Absconded	4	1	5
Deaths	35	21	56
Patients remaining October 1, 1902	219	245	464
Number of different persons treated during year	337	333	670
Number of different persons admitted	131	105	236
Number of different persons recovered	42	34	76
Daily average number of patients	223.86	242.49	466.35

TABLE II.

Showing the results in all under treatment during the year.

	Of those in the hospital at the beginning of the year.			Of those admitted during the year.			Total of both classes.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Discharged recovered	11	15	26	20	17	37	31	32	63
" much improved	11	9	20	11	8	19	22	17	39
" improved	3	6	9	4	1	5	7	7	14
" not improved	6	11	17	5	3	8	11	14	25
" alcoholism	2	.....	2	9	1	10	11	1	12
" morphinism .....	.....	.....	.....	1	1	2	.....	1	1
" absconded	3	1	4	1	.....	1	4	1	5
" not insane .....	.....	.....	.....	1	1	2	1	1	2
Deaths	22	14	36	13	7	20	35	21	56
Remaining improved	58	76	134	31	36	67	89	112	201
" not improved	95	99	194	35	34	69	130	133	263

TABLE III.

Admissions and discharges from the beginning of the hospital.

	Men.	Women.	Total.
Admitted	3,980	3,744	7,724
Discharged	3,726	3,429	7,155
" recovered	1,198	1,174	2,372
" improved	896	861	1,757
" not improved	776	752	1,528
" not insane	24	17	41
" unknown	76	13	89
Died.....	789	651	1,440

TABLE IV.

Showing number and character of those recovered during the year.

	Cases in which recurrence is established.			Cases in which recurrence is not established.			Total of both classes.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
From first attack.....				32	18	50	32	18	50
From second attack.....				7	10	17	7	10	17
From third attack	1	3	4				1	3	4
From fourth attack	2	1	3				2	1	3
From seventh attack		1	1					1	1
From thirteenth attack		1	1					1	1
Total.....	3	6	9	39	28	67	42	34	76

TABLE V.

Showing duration of insanity in those recovered during the year.

	Men.	Women.	Total.
One to three months	23	12	35
Three to four months	3	3	6
Four to six months.....	6	6	12
Six to twelve months.....	4	9	13
More than one year	6	4	10
Total.....	42	34	76

TABLE VI.

Showing number of admissions in this hospital in those admitted during the year.

	Men.	Women.	Total.
Admitted the first time	100	82	182
“ second time	25	22	47
“ third time	6	3	9
“ fourth time	3	1	4
“ fifth time	1	1	1
“ sixth time	1	1	1
“ eighth time	1	1	1
“ eleventh time	1	1	1
“ thirteenth time	1	1	1
Total.....	135	112	247

TABLE VII.

Showing number of the attack in those admitted during the year.

	Men.	Women.	Total.
First	110	95	205
Second ..	15	10	25
Third	4	2	6
Fourth	5	2	5
Fifth	1	2	2
Eighth	1	1	1
Eleventh	1	1	1
Thirteenth.....	1	1	1
Total.....	135	112	247

TABLE VIII.

Showing duration of insanity in those admitted during the year.

	Men.	Women.	Total.
Less than one month.....	34	22	56
One to three months	21	9	30
Three to six months	12	12	24
Six to nine months	4	11	15
Nine to twelve months.....	3	3	6
Twelve to eighteen months.....	5	6	11
Eighteen months to two years.....	3	2	5
Two to three years.....	7	3	10
Three to four years	4	6	10
Four to five years	4	5	9
Five to ten years	9	7	16
Ten to fifteen years	4	6	10
Fifteen to twenty years.....	1	8	8
Over twenty years	6	8	14
Unknown	19	4	23
Total	135	112	247

TABLE IX.

Showing ages of those admitted during the year.

	Men.	Women.	Total.
Fifteen to twenty years.....	5	6	11
Twenty to twenty-five years.....	8	8	16
Twenty-five to thirty years.....	18	7	25
Thirty to thirty-five years.....	19	10	29
Thirty-five to forty years.....	14	9	23
Forty to forty-five years.....	21	13	34
Forty-five to fifty years.....	10	8	18
Fifty to sixty years.....	15	25	40
Sixty to seventy years.....	15	16	31
Seventy to eighty years.....	8	9	17
Eighty to ninety years.....	2	1	3
Total.....	135	112	247

TABLE X.

Showing form of disease in those admitted during the year.

	Men.	Women.	Total.
Typho-mania.....	1	.....	1
Acute mania.....	10	8	18
Sub-acute mania.....	8	4	12
Recurrent mania.....	4	3	7
Puerperal mania.....	1	1	1
Chronic mania.....	2	2	4
Senile mania.....	.....	4	4
Epileptic mania.....	1	.....	1
Acute melancholia.....	22	26	48
Sub-acute melancholia.....	3	3	6
Chronic melancholia.....	1	1	2
Senile melancholia.....	.....	3	3
Circular insanity.....	3	2	5
Acute confusional insanity.....	3	1	4
Chronic confusional insanity.....	1	.....	1
Alcoholic insanity.....	2	1	3
Dementia precox.....	3	.....	3
Secondary dementia.....	4	4	8
Chronic dementia.....	16	19	35
Epileptic dementia.....	3	.....	3
Senile dementia.....	8	6	14
Organic dementia.....	.....	1	1
Chronic delusional insanity.....	12	13	25
Paranoia.....	3	.....	3
Paresis.....	2	1	3
Organic brain disease.....	1	.....	1
Congenital imbecility.....	7	2	9
Imbecility.....	2	2	4
Epilepsy.....	1	.....	1
Acute alcoholism.....	9	1	10
Morphinism.....	.....	1	1
Hypochondriasis.....	2	2	4
Not insane.....	1	1	2
Total.....	135	112	247

TABLE XI.

Showing complications in those admitted during the year.

	Men.	Women.	Total.
Heredity	16	25	41
Intemperance	32	2	34
Epilepsy	7	6	13
Apoplexy	2	1	3
Tuberculosis	3	1	4
Menopause .....	.....	4	4
Paralysis	1	2	3
Chronic nephritis	2	1	3
Heart disease	2	.....	2
Hernia	1	1	2
Rheumatism	1	1	2
Uterine disease .....	.....	3	3
Puerperal .....	.....	2	2
Miscarriage .....	.....	1	1
Gastritis	2	.....	2
Phimosis	1	.....	1
Mutism	2	.....	2
Influenza	2	2	4
Gas poisoning	1	.....	1
Morphinism	1	3	4
Depressed fracture skull	1	.....	1
Masturbation	6	.....	6

TABLE XII.

Showing number with suicidal propensities under treatment during the year.

	Men.	Women.	Total.
Of those in the hospital at the beginning of the year.	25	31	56
Of those admitted during the year	33	33	66
Total	58	64	122

TABLE XIII.

Showing civil condition of those admitted during the year.

	Men.	Women.	Total.
Married	49	47	96
Single	68	44	112
Widowed	17	19	36
Divorced	1	2	3
Total	135	112	247

TABLE XIV.

Showing occupation of those admitted during the year.

	Men.	Women.	Total.
Baker	2		2
Barber	1		1
Bookkeeper		3	3
Blacksmith	1		1
Brick mason	1		1
Butler	1		1
Carpenter	3		3
Caterer	2		2
Cabinet maker	1		1
Clergyman	1		1
Compositor		1	1
Cook	1		1
Domestic		17	17
Dressmaker		1	1
Drummer	1		1
Electrician	1		1
Engineer, railroad	2		2
Draftsman	1		1
Farmer	21		21
Hod carrier	1		1
Hotel keeper	1		1
Housewife		54	54
Janitor	1		1
Laborer	21		21
Lawyer	1		1
Loom fixer	1		1
Lumberman	1		1
Machinist	2		2
Merchant	6		6
Mill operative	3	6	9
Moulder	3		3
Night watchman	1		1
No occupation	27	26	53
Painter	4		4
Policeman	2		2
Paper mill operative	1		1
Physician	1		1
Printer	1		1
Quarryman	1		1
Roadmaster	1		1
Salesman	2		2
Stone mason	4		4
Shoemaker	6		6
Steamboat captain	1		1
Tailor	1		1
Teacher		3	3
Watchmaker	1		1
Weaver		1	1
Total	135	112	247

TABLE XV.

Showing nativity of those admitted during the year.

	Men.	Women.	Total.
New Hampshire.....	86	61	147
Maine.....	3	5	8
Vermont.....	6	6	12
Massachusetts.....	6	4	10
Connecticut.....	1	.....	1
New York.....	2	3	5
Iowa.....	.....	1	1
Michigan.....	.....	1	1
West Virginia.....	1	.....	1
Canada.....	10	11	21
Nova Scotia.....	3	2	5
New Brunswick.....	.....	1	1
Prince Edward Island.....	1	.....	1
Ireland.....	8	13	21
England.....	2	1	3
Sweden.....	1	1	2
Finland.....	1	.....	1
France.....	1	.....	1
Scotland.....	3	2	5
Total.....	135	112	247

TABLE XVI.

Showing residence of those admitted during the year.

	Men.	Women.	Total.
Hillsborough county.....	20	21	41
Merrimack ".....	49	43	92
Cheshire ".....	4	7	11
Rockingham ".....	12	5	17
Strafford ".....	15	12	27
Grafton ".....	16	10	26
Sullivan ".....	7	3	10
Belknap ".....	3	5	8
Carroll ".....	3	3	6
Coos ".....	3	2	5
Vermont.....	1	.....	1
Rhode Island.....	1	.....	1
Massachusetts.....	1	.....	1
Canada.....	.....	1	1
Total.....	135	112	247

TABLE XVII.

Showing by what authority committed.

	Men.	Women.	Total.
By friends	57	55	112
By state commission of lunacy	1	.....	1
By county	44	42	86
By town or city	25	13	38
By courts	6	2	8
By self	2	.....	2
Total	135	112	247

TABLE XVIII.

Showing by whom supported.

	Men.	Women.	Total.
Self or friends	51	45	96
Counties	36	38	74
Towns or cities	5	3	8
State, including cases sent by supreme court, by order of the governor, and by the commission of lunacy	43	26	69
Total	135	112	247

TABLE XIX.

Deaths during the year and their causes.

	Men.	Women.	Total.
Exhaustion from organic brain disease	2	3	5
“ from typho-mania	1	.....	1
“ from acute mania .....	.....	1	1
“ from chronic melancholia .....	.....	1	1
“ from primary dementia	1	.....	1
“ from acute confusional insanity .....	.....	1	1
“ from senile dementia	3	6	9
“ from chronic dementia .....	.....	1	1
Epilepsy	2	.....	2
Apoplexy	3	.....	3
Paresis	3	.....	3
Organic heart disease	1	5	6
Pneumonia	2	.....	2
Broncho-pneumonia	3	.....	3
Chronic bronchitis	1	.....	1
Pulmonary tuberculosis	5	1	6
Œdema of lungs	1	.....	1
Diphtheria .....	.....	1	1
Erysipelas	2	.....	2
Septic infection ..	1	.....	1
Pyæmia	1	.....	1
Tubercular peritonitis	1	.....	1
Chronic interstitial nephritis	2	.....	2
Pernicious anæmia .....	.....	1	1
Total	35	21	56

TABLE XX.

Showing ages at time of death.

	Men.	Women.	Total.
Between twenty and thirty years of age	4	.....	4
“ thirty and forty years of age	5	.....	5
“ forty and fifty years of age	6	3	9
“ fifty and sixty years of age	3	5	8
“ sixty and seventy years of age	8	4	12
“ seventy and eighty years of age	6	7	13
“ eighty and ninety years of age	3	2	5
Total	35	21	56

TABLE XXI.

Showing ages of those remaining at the end of the year.

	Men.	Women.	Total.
Under twenty years of age.....	2	3	5
Twenty to thirty years of age.....	36	21	57
Thirty to forty years of age.....	42	47	89
Forty to fifty years of age.....	46	50	96
Fifty to sixty years of age.....	39	57	96
Sixty to seventy years of age.....	38	47	85
Seventy to eighty years of age.....	12	16	28
Over eighty years of age.....	4	4	8
Total.....	219	245	464

TABLE XXII.

Showing duration of disease in those remaining at end of year.

	Men.	Women.	Total.
From one to three months.....	3	7	10
From three to six months.....	10	4	14
From six to nine months.....	8	10	18
From nine to twelve months.....	5	2	7
From twelve to eighteen months.....	11	13	24
From eighteen months to two years.....	4	5	9
From two to three years.....	13	15	28
From three to four years.....	11	14	25
From four to five years.....	15	15	30
From five to ten years.....	27	48	75
From ten to fifteen years.....	23	27	50
From fifteen to twenty years.....	15	21	36
From twenty to twenty-five years.....	17	19	36
From twenty-five to thirty years.....	4	13	17
From thirty to forty years.....	15	13	28
Over forty years.....	8	11	19
Unknown.....	30	8	38
Total.....	219	245	464

TABLE XXIII.

Showing prospects of recovery in those admitted during the year.

	Men.	Women.	Total.
Curable (apparently).....	61	47	108
Incurable (apparently).....	73	64	137
Not insane.....	1	1	2
Total.....	135	112	247

TABLE XXIV.

Showing prospects of those remaining at the end of the year.

	Men.	Women.	Total.
Curable (apparently).....	26	36	62
Incurable (apparently)	193	209	402
Total.....	219	245	464

TABLE XXV.

Statistics of admissions, discharges, and deaths from the opening of the hospital.

Year.	Admitted.	Discharged and died.	Recovered.	Improved.	Unimproved.	Died.	Whole number under treatment.	Remaining at end of hospital year.	Daily averages of the hospital.		
									Men.	Women.	Total.
1843	76	29	12	10	6	1	76	47	.....	.....	.....
1844	104	81	37	20	19	5	151	70	.....	.....	.....
1845	88	82	37	17	22	6	158	76	.....	.....	.....
1846	98	76	26	23	16	11	174	98	.....	.....	.....
1847	89	87	38	17	23	9	187	100	.....	.....	.....
1848	92	83	29	20	26	8	192	109	.....	.....	.....
1849	81	76	36	15	11	14	190	114	.....	.....	.....
1850	103	90	45	18	20	7	217	127	.....	.....	.....
1851	88	98	45	25	16	12	215	117	.....	.....	.....
1852	107	106	66	13	16	11	224	118	.....	.....	.....
1853	132	107	65	25	11	8	250	143	.....	.....	.....
1854	141	123	63	24	22	14	284	161	.....	.....	.....
1855	95	91	50	20	9	12	246	155	.....	.....	.....
1856	85	96	66	13	7	10	250	154	.....	.....	.....
1857	97	81	47	15	7	12	251	170	.....	.....	.....
1858	76	77	34	20	5	18	246	169	.....	.....	.....
1859	98	85	31	22	18	14	267	182	.....	.....	.....
1860	85	83	38	16	12	17	267	184	94.0	88.0	182.0
1861	106	94	34	34	10	16	290	196	90.0	100.0	190.0
1862	86	94	42	32	7	13	282	188	88.7	105.7	101.4
1863	101	85	30	32	17	16	289	204	87.4	105.9	193.3
1864	105	92	36	16	17	23	309	217	99.4	107.4	206.8
1865	107	102	42	23	14	22	324	223	102.5	115.9	218.4
1866	104	91	26	28	16	21	327	236	106.3	122.6	228.9
1867	117	107	39	24	27	17	353	246	119.3	122.6	241.9
1868	118	129	51	39	18	21	364	235	118.5	121.27	239.77
1869	95	93	42	20	9	22	330	237	113.7	129.9	243.6
1870	130	114	37	34	20	23	367	253	123.1	125.9	249.0
1871	135	163	65	37	29	32	388	225	119.8	123.44	242.82
1872	152	123	55	31	16	21	377	254	109.36	125.19	234.55
1873	194	172	61	51	27	33	448	273	127.8	139.5	267.3
1874	140	137	42	44	27	22	416	281	140.4	127.5	267.9
1875	120	140	53	37	30	20	401	261	136.6	138.1	274.7
1876	140	122	35	34	27	26	401	279	121.4	139.1	260.5
1877	119	118	36	38	27	17	398	280	124.2	150.3	274.5
1878	114	118	35	36	30	17	394	276	128.9	143.8	272.7
1879	73	81	27	23	8	23	349	268	126.3	143.8	270.1
1880	111	94	28	27	22	17	379	285	127.4	147.6	275.0
1881	154	117	33	39	23	22	419	302	133.3	158.6	291.9
1882	104	121	38	26	27	30	406	285	131.0	159.1	290.1
1883	133	123	41	23	34	25	418	295	120.3	164.1	284.4
1884	141	127	18	41	44	24	436	309	124.3	169.5	293.8
1885	138	122	30	20	36	36	447	322	128.3	181.9	310.2
1886	138	143	43	30	34	34	460	317	139.82	182.37	322.19
1887	143	128	32	28	28	33	460	328	137.22	184.12	321.34
1888	137	125	33	26	35	28	465	339	150.49	183.59	334.08
1889	155	158	41	38	34	36	494	337	161.06	175.80	336.86
1890	276	223	79	28	63	53	602	364	166.52	184.57	351.09
1891	173	165	42	40	37	38	527	372	175.62	184.99	360.61
1892	169	181	51	39	40	42	531	359	181.40	182.38	363.78
1893	166	154	47	35	34	37	508	368	183.72	193.63	369.02
1894	187	152	52	33	27	35	542	402	190.14	193.35	383.49
1895	175	165	55	45	27	36	566	414	199.57	204.79	404.36
1896	181	171	42	44	34	40	586	422	201.31	210.65	411.96
1897	147	147	38	30	30	36	561	422	210.26	214.60	424.86
1898	150	163	46	40	34	33	567	409	201.93	210.71	412.64
1899	179	161	48	26	34	39	577	427	202.38	220.88	423.26
1900	149	151	57	37	26	49	568	425	198.42	221.71	420.13
1901	202	193	52	56	31	49	617	434	203.12	222.53	425.65
1902	247	217	76	53	25	56	670	464	223.86	242.49	466.35

TREASURER'S REPORT

FOR THE YEAR ENDING SEPTEMBER 30, 1901.

To the Trustees of the New Hampshire State Hospital:

The following statement of receipts and expenditures, from October 1, 1900, to September 30, 1901, inclusive, is respectfully submitted:

RECEIPTS.

Balance on hand.....	\$93.02
Cash received for board of private patients.....	49,937.59
received for board of town patients.....	3,064.37
received for board of county patients.....	11,093.67
received of state treasurer for board of twenty-year indigent insane.....	4,370.92
received of state treasurer for board of crim- inal insane	6,006.73
received of state treasurer for board of pa- tients transferred to state support by order of commissioners of lunacy.....	16,107.80
received of state treasurer for aid to indi- gent patients	6,000.00
received of state treasurer for library.....	100.00
received of financial agent as income from John Conant fund.....	316.00
received of financial agent as income from Isaac Adams fund.....	180.00
received of financial agent for aid to indi- gent patients	8,000.00

Cash received of financial agent for improvement of grounds	\$500.00
received for stock and articles sold.....	1,931.22
received from Concord District Nursing As- sociation	170.54
Money borrowed for payment of coal contract...	3,290.07
Cash received from all other sources.....	3.27
	<hr/>
	\$111,165.20

EXPENDITURES.

Cash paid for meats.....	\$11,561.44
paid for flour.....	2,039.85
paid for butter.....	4,260.93
paid for cheese.....	235.45
paid for sugar.....	2,359.85
paid for fish.....	1,475.65
paid for coffee.....	532.17
paid for tea.....	970.55
paid for fruit and other vegetables.....	341.76
paid for potatoes.....	1,002.96
paid for groceries.....	6,991.91
paid for house furnishing goods.....	3,925.94
paid for articles furnished and charged....	5,044.09
paid for lighting.....	2,842.84
paid for heating and cooking.....	9,206.30
paid for medical and surgical supplies....	1,041.41
paid for services.....	28,695.61
paid for ordinary repairs of buildings.....	7,269.61
paid for permanent improvements.....	2,736.11
paid for provender.....	2,521.21
paid for farming department, including farm implements, all improvements of farm and grounds, exclusive of farm employees....	3,707.30
paid for farm employees.....	3,411.27
paid for stationery, library, printing, etc..	437.42
paid for postage, express, and freight.....	580.37
paid for traveling expenses of trustees....	73.60

Cash paid for public exercises, including Sunday services and all public means to interest and occupy the patients.....	\$593.94
paid for notes on account of coal contract..	4,816.32
paid for miscellaneous items.....	239.02
	<hr/>
Whole amount expended.....	\$108,914.88
Balance of income carried to new account.....	2,250.32
	<hr/>
	\$111,165.20

CHARLES P. BANCROFT,
Treasurer.

CONCORD, N. H., October 1, 1901.

I have examined the vouchers representing payments made by Charles P. Bancroft, treasurer of the New Hampshire State Hospital, for the year ending September 30, 1901, and find the same properly entered, the footings to be correct, and the balance in the hands of the treasurer to be twenty-two hundred fifty and 32-100 dollars (\$2,250.32).

W. F. THAYER,
Auditor.

CONCORD, N. H., November 19, 1901.

TREASURER'S REPORT

FOR YEAR ENDING SEPTEMBER 30, 1902.

To the Trustees of the New Hampshire State Hospital:

The following statement of receipts and expenditures from October 1, 1901, to September 30, 1902, inclusive, is respectfully submitted:

RECEIPTS.

Balance on hand.....	\$2,250.32
Cash received for board of private patients.....	46,868.06
received for board of town patients.....	3,235.79
received for board of county patients.....	17,267.65
received of state treasurer for board of twenty-year indigent insane.....	4,219.64
received of state treasurer for board of crim- inal insane	5,192.94
received of state treasurer for board of pa- tients transferred to state support by order of commissioners of lunacy.....	15,206.49
received of state treasurer for aid to indi- gent patients	6,000.00
received of state treasurer for library.....	100.00
received of financial agent as income from John Conant fund.....	267.25
received of financial agent as income from Isaac Adams fund.....	180.00
received of financial agent for aid to indi- gent patients	8,000.00

Cash received of financial agent for improvement	
of grounds	\$500.00
received for stock and articles sold.....	1,493.96
received from all other sources.....	320.97
	<hr/>
	\$111,103.07

EXPENDITURES.

Cash paid for meats.....	\$7,221.20
paid for flour.....	2,446.96
paid for butter	4,430.07
paid for cheese.....	197.65
paid for sugar.....	1,876.65
paid for molasses.....	115.65
paid for fish.....	1,250.72
paid for coffee.....	267.74
paid for tea.....	561.09
paid for fruit and other vegetables.....	360.59
paid for potatoes.....	1,129.32
paid for groceries.....	8,101.04
paid for house furnishing goods.....	4,435.32
paid for articles furnished and charged....	6,387.86
paid for lighting.....	2,804.47
paid for heating and cooking.....	9,294.84
paid for medical and surgical supplies.....	969.34
paid for services of all forms in care of pa- tients and household, exclusive of farm and grounds	30,330.43
paid for ordinary repairs of buildings.....	6,749.55
paid for permanent improvements.....	4,794.84
paid for provender.....	3,219.47
paid for farming department, including farm implements, all improvements of farm and grounds, exclusive of farm employees....	2,482.25
paid for farm employees.....	4,065.59
paid for stationery, library, printing, etc...	771.21
paid for postage, express, and freight.....	793.79
paid for traveling expenses of trustees.....	71.70

Cash paid for public exercises, including Sunday services and all public means to interest and occupy the patients.....	\$634.60
paid for miscellaneous items.....	220.00
<hr/>	
Whole amount expended.....	\$105,983.94
Balance of income carried to new account.....	5,119.13
<hr/>	
	\$111,103.07

CHARLES P. BANCROFT,

Treasurer.

CONCORD, N. H., October 1, 1902.

I hereby certify that I have examined the vouchers representing payments made by Charles P. Bancroft, treasurer of the New Hampshire State Hospital, for the year ending September 30, 1902. I find the same correctly entered on the cash book and a balance in the hands of the treasurer of fifty-one hundred and nineteen dollars and thirteen cents (\$5,119.13).

W. F. THAYER,

Auditor.

CONCORD, N. H., November 20, 1902.

THIRTY-FIFTH ANNUAL REPORT OF THE FINANCIAL AGENT.

To the Trustees of the New Hampshire State Hospital:

The financial agent respectfully presents this report of his receipts and expenditures from October 1, 1900, to September 30, 1901, and of the amounts and investments of the permanent funds of the hospital in his custody at the date last mentioned:

RECEIPTS.

Cash brought from last year's account.....	\$1,663.68
received on account of sundry bonds and stocks	11,795.67
received for interest and dividends.....	15,536.58
	\$28,995.93

EXPENDITURES.

Cash paid treasurer for support of indigent pa- tients, etc.	\$8,000.00
paid treasurer, income of Adams fund....	180.00
paid treasurer, income of Conant fund....	316.00
paid New Hampshire Savings Bank on ac- count of loan (\$4,500) and interest (\$515)	5,015.00
paid for securities purchased.....	9,371.17
paid for insurance	1,037.30
paid for sundry miscellaneous expenses, in- cluding salary of financial agent, rent of box in Boston Safe Deposit & Trust Com- pany, etc.	879.09
carried to new account.....	4,197.37
	\$28,995.93

The following were the permanent funds of the hospital October 1, 1901, accompanied by lists of the securities in which they are invested:

ADAMS FUND.

(Gift of Isaac Adams, of Sandwich.)

3 shares Nashua National Bank stock.....	\$300.00
10 shares Pittsburg, Fort Wayne & Chicago Rail- road stock	1,000.00
1 share Suffolk National Bank stock.....	100.00
2 United States bonds.....	600.00
1 Iowa Loan & Trust Company bond.....	1,000.00
	<hr/>
	\$3,000.00

BURROUGHS FUND.

(Legacy of Rev. Charles Burroughs, D. D., of Portsmouth.)

1 St. Louis County bond.....	\$1,000.00
------------------------------	------------

CHANDLER FUND.

(Legacy of Abiel Chandler, of Walpole.)

6 Iowa Loan & Trust Company bonds.....	\$3,300.00
2 Columbus, Ohio, bonds.....	2,000.00
1 Old Colony Railroad bond.....	1,000.00
1 Boston & Lowell Railroad bond.....	5,000.00
62 shares Boston & Maine Railroad stock.....	6,200.00
100 shares Chicago, Rock Island & Pacific Rail- road stock	10,000.00
2 shares Northern Railroad stock.....	200.00
10 shares Michigan Central Railroad stock.....	1,000.00
10 shares Pittsburg, Fort Wayne & Chicago Rail- road stock	1,000.00
3 shares State National Bank stock.....	300.00
	<hr/>
	\$30,000.00

CONANT FUND.

(Legacy of John Conant, of Jaffrey.)

4 Iowa Loan & Trust Company bonds.....	\$4,000.00
1 Concord & Montreal Railroad bond.....	1,000.00
1 New Hampshire Trust Company bond (45 per cent paid)	275.00
3 shares Boston & Maine Railroad stock.....	300.00
2 shares Boston & Providence Railroad stock....	200.00
	<hr/>
	\$5,775.00

CREIGHTON FUND.

(Legacy of Mrs. S. E. W. Creighton, of Newmarket.)

1 Boston & Providence Railroad bond.....	\$1,000.00
2 Boston & Maine Railroad bonds.....	2,000.00
	<hr/>
	\$3,000.00

DANFORTH FUND.

(Legacy of Mary Danforth, of Boscawen.)

4 shares Suffolk National Bank stock.....	\$400.00
---	----------

FISK FUND.

(Legacy of Catherine Fisk, of Keene.)

This fund is held in trust by the state, in accordance with an act of the legislature, approved August 4, 1887.....	
	\$26,378.43

FULLER FUND.

(Legacy of Mrs. Peggy Fuller, of Francestown.)

20 shares Boston & Maine Railroad stock.....	\$2,000.00
--	------------

KENT FUND.

(Legacy of Moody Kent, of Pittsfield.)

3 Minneapolis bonds	\$3,000.00
3 United States bonds.....	1,200.00
5 Oregon Short Line Railroad bonds.....	5,000.00
5 Eastern Railroad bonds.....	5,000.00

21 Chicago, Burlington & Quincy Railroad bonds	\$21,000.00
9 Chicago & Northwestern Railroad bonds...	9,000.00
7 Philadelphia, Wilmington & Baltimore Railroad bonds	7,000.00
10 Boston & Lowell Railroad bonds.....	10,000.00
7 Concord & Montreal Railroad bonds.....	7,000.00
7 Duluth bonds	7,000.00
5 Columbus bonds	5,000.00
3 Chicago bonds	3,000.00
5 Northern Pacific Railway bonds.....	5,000.00
5 St. Joseph & Grand Island Railway bonds..	5,000.00
5 Boston & Maine Railroad bonds.....	5,000.00
12 Old Colony Railroad bonds.....	12,000.00
25 shares Northern Pacific Railway Company preferred stock	2,500.00
50 shares Pittsburg, Fort Wayne & Chicago Railroad stock	5,000.00
42 shares Northern Railroad stock.....	4,200.00
100 shares Michigan Central Railroad stock....	10,000.00
2 shares Boston & Providence Railroad stock..	200.00
10 shares Chicago, Rock Island & Pacific Railroad stock	1,000.00
70 shares St. Joseph, Grand Island & Pacific Railroad, 1st preferred stock.....	7,000.00
25 shares St. Joseph, Grand Island & Pacific Railroad, 2d preferred stock.....	2,500.00
50 shares Fitchburg National Bank stock.....	5,000.00
47 shares State National Bank stock.....	4,700.00
7 shares Railroad National Bank stock.....	700.00
	<hr/>
	\$153,000.00

KIMBALL FUND.

(Legacy of Jacob Kimball, of Hampstead.)

This fund is held in trust by the state, in accordance with an act of the legislature, approved

1845 \$6,753.49

LOW FUND.

(Legacy of Abiel Low, of Brooklyn, N. Y.)

3 Columbus bonds	\$3,000.00
2 Chicago bonds	2,000.00
	<hr/>
	\$5,000.00

PENHALLOW FUND.

(Legacy of H. Louise Penhallow, of Portsmouth.)

1 Concord & Montreal Railroad bond.....	\$1,000.00
---	------------

PIPER FUND.

(Legacy of Rhoda C. Piper, of Hanover.)

1 share Railroad National Bank stock.....	\$100.00
---	----------

RICE FUND.

(Legacy of Arabella Rice, of Portsmouth.)

5 Oregon Short Line Railroad bonds.....	\$5,000.00
7 New Hampshire Trust Company bonds (45 per cent paid)	3,850.00
3 Old Colony Railroad bonds.....	3,000.00
1 Chicago & Northwestern Railroad bond....	1,000.00
1 United States bond, registered.....	5,000.00
11 shares Chicago, Rock Island & Pacific Rail- road stock	1,100.00
	<hr/>
	\$18,950.00

RUMFORD FUND.

(Legacy of the Countess of Rumford, of Concord.)

5 Concord & Montreal Railroad bonds.....	\$5,000.00
5 Philadelphia, Wilmington & Baltimore Rail- road bonds	5,000.00
30 shares Pittsburg, Fort Wayne & Chicago Rail- road stock	3,000.00
20 shares Boston & Providence Railroad stock..	2,000.00
	<hr/>
	\$15,000.00

SHERMAN FUND.

(Legacy of Mrs. Fanny S. Sherman, of Exeter.)

3 Iowa Loan & Trust Company bonds.....	\$3,000.00
1 St. Louis County bond.....	1,000.00
1 Old Colony Railroad bond.....	1,000.00
	<hr/>
	\$5,000.00

SMITH FUND.

(Legacy of Betsey F. Smith, of New Ipswich.)

5 shares Nashua National Bank stock.....	\$500.00
--	----------

SPALDING FUND.

(Legacy of Isaac Spalding, of Nashua.)

6 Concord & Montreal Railroad bonds.....	\$6,000.00
2 Boston & Providence Railroad bonds.....	2,000.00
1 Boston & Lowell Railroad bond.....	1,000.00
1 Old Colony Railroad bond.....	1,000.00
	<hr/>
	\$10,000.00

SPRING FUND.

2 shares Nashua National Bank stock.....	\$200.00
--	----------

WALKER FUND.

(Legacy of Abigail B. Walker, of Concord.)

10 shares Nashua National Bank stock.....	\$1,000.00
25 shares State National Bank stock.....	2,500.00
1 Boston & Lowell Railroad bond.....	1,000.00
1 Salt Lake City bond.....	1,000.00
5 Boston & Maine Railroad bonds.....	5,000.00
4 Old Colony Railroad bonds.....	4,000.00
	<hr/>
	\$14,500.00

WILLIAMS FUND.

(Gift of John Williams, of Hanover.)

2 shares Railroad National Bank stock.....	\$200.00
--	----------

In addition to the above-mentioned permanent funds, amounting to three hundred and one thousand seven hundred and fifty-six dollars and ninety-two cents (\$301,756.92), there are in the hands of the financial agent forty-three shares of old Shawmut Bank stock, upon which 112 per cent has been paid, and one five-hundred-dollar bond of the New Hampshire Trust Company, upon which 45 per cent of the principal has been returned. Payments received from time to time on these are entered on the general cash account, to be applied hereafter as the by-laws require.

The debt of twelve thousand dollars (\$12,000), incurred some years since for finishing and furnishing the Twitchell building and for the introduction of fireproof ventilators to the attics of the hospital structures, has been reduced to three thousand dollars. As appears by the foregoing account, forty-five hundred dollars of the principal has been discharged the past year.

JOSEPH B. WALKER,
Financial Agent.

CONCORD, N. H., November 16, 1901.

CONCORD, N. H., November 16, 1901.

I hereby certify that I have examined the foregoing report of the receipts and expenditures of J. B. Walker, financial agent of the New Hampshire State Hospital, from October 1, 1900, to September 30, 1901, inclusive, and find the same correctly cast and satisfactorily vouched. I have also compared the foregoing schedule of the securities of the New Hampshire State Hospital with the securities in his hands, and find the same to agree in all particulars.

W. F. THAYER,
Auditor.

THIRTY-SIXTH ANNUAL REPORT OF THE FINANCIAL AGENT.

To the Trustees of the New Hampshire State Hospital:

The financial agent respectfully presents this report of his receipts and expenditures from October 1, 1901, to September 30, 1902, inclusive, and of the amounts and investments of the permanent funds of the hospital in his custody at the date last mentioned:

RECEIPTS.

Cash brought from last year's account.....	\$4,197.37
received on account of sundry securities paid, sold, liquidated, or exchanged....	43,721.62
received for rights to subscribe for new stock sold	1,285.63
received for rebate on money paid.....	180.50
received for interest and dividends.....	14,407.28
	<hr/>
	\$63,792.40

EXPENDITURES.

Cash paid treasurer for support of indigent pa- tients, etc.	\$10,000.00
paid treasurer for improvement of hospital grounds	1,000.00
paid treasurer, income of Adams fund....	180.00
paid treasurer, income of Conant fund....	346.25
paid New Hampshire Savings Bank, loan (\$3,000) and interest (\$84.59).....	3,084.59
paid for securities purchased.....	38,788.83
paid for insurance.....	1,023.85

Cash paid for sundry miscellaneous expenses:	
Land purchased, \$200; financial agent for salary and money advanced, \$857.41; Mrs. J. H. Carr, \$50; surety bond, \$40; Boston Safe Deposit & Trust Company, \$30	\$1,177.49
carried to new account	8,191.47
	<hr/>
	\$63,792.40

The following were the several permanent funds of the hospital, October 1, 1902, accompanied by lists of the securities in which they are invested:

ADAMS FUND.

(Gift of Isaac Adams, of Sandwich.)

10 shares Pittsburg, Fort Wayne & Chicago Railroad stock	\$1,000.00
4 shares First National Bank of Nashua stock..	400.00
2 United States bonds.....	600.00
1 Iowa Loan & Trust Company bond.....	1,000.00
	<hr/>
	\$3,000.00

BURROUGHS FUND.

(Legacy of Rev. Charles Burroughs, D. D., of Portsmouth.)

1 St. Louis County bond.....	\$1,000.00
------------------------------	------------

CHANDLER FUND.

(Legacy of Abiel Chandler, of Walpole.)

6 Iowa Loan & Trust Company bonds.....	\$3,300.00
2 Columbus, Ohio, bonds.....	2,000.00
1 Old Colony Railroad bond.....	1,000.00
1 Boston & Lowell Railroad bond.....	5,000.00
2 Concord & Montreal Railroad bonds.....	2,000.00
2 Boston & Maine Railroad bonds.....	8,000.00
62 shares Boston & Maine Railroad stock.....	6,200.00
2 shares Northern Railroad stock.....	200.00
10 shares Michigan Central Railroad stock.....	1,000.00

10 shares Pittsburg, Fort Wayne & Chicago Railroad stock	\$1,000.00
3 shares State National Bank stock.....	300.00
	<hr/>
	\$30,000.00

CONANT FUND.

(Legacy of John Conant, of Jaffrey.)

2 Concord & Montreal Railroad bonds.....	\$2,000.00
4 Iowa Loan & Trust Company bonds.....	4,000.00
3 shares Boston & Maine Railroad stock.....	300.00
2 shares Boston & Providence Railroad stock....	200.00
	<hr/>
	\$6,500.00

CREIGHTON FUND.

(Legacy of Mrs. S. E. W. Creighton, of Newmarket.)

1 Boston & Providence Railroad bond.....	\$1,000.00
2 Boston & Maine Railroad bonds.....	2,000.00
	<hr/>
	\$3,000.00

DANFORTH FUND.

(Legacy of Mary Danforth, of Boscawen.)

4 shares Suffolk National Bank stock.....	\$400.00
---	----------

FISK FUND.

(Legacy of Catherine Fisk, of Keene.)

This fund is held in trust by the state, in accordance with an act of the legislature, approved August 4, 1887.....	\$26,378.43
---	-------------

FULLER FUND.

(Legacy of Mrs. Peggy Fuller, of Francestown.)

20 shares Boston & Maine Railroad stock.....	\$2,000.00
--	------------

KENT FUND.

(Legacy of Moody Kent, of Pittsfield.)

3 Minneapolis bonds	\$3,000.00
3 United States bonds.....	1,200.00

5 Oregon Short Line Railroad bonds.....	\$5,000.00
5 Eastern Railroad bonds.....	5,000.00
21 Chicago, Burlington & Quincy Railroad bonds	21,000.00
9 Chicago & Northwestern Railroad bonds...	9,000.00
7 Philadelphia, Wilmington & Baltimore Rail- road bonds	7,000.00
10 Boston & Lowell Railroad bonds.....	10,000.00
7 Concord & Montreal Railroad bonds.....	7,000.00
7 Duluth bonds	7,000.00
5 Columbus bonds	5,000.00
3 Chicago bonds	3,000.00
5 Northern Pacific Railway bonds.....	5,000.00
5 St. Joseph & Grand Island Railway bonds..	5,000.00
5 Boston & Maine Railroad bonds.....	5,000.00
12 Old Colony Railroad bonds.....	12,000.00
50 shares Pittsburg, Fort Wayne & Chicago Railroad stock	5,000.00
42 shares Northern Railroad stock.....	4,200.00
100 shares Michigan Central Railroad stock....	10,000.00
2 shares Boston & Providence Railroad stock..	200.00
50 shares Fitchburg National Bank stock.....	5,000.00
7 shares Union National Bank stock.....	700.00
47 shares State National Bank stock.....	4,700.00
10 shares St. Joseph, Grand Island & Pacific Railroad, 1st preferred stock.....	7,000.00
25 shares St. Joseph, Grand Island & Pacific Railroad, 2d preferred stock.....	2,500.00
1 Concord & Montreal Railroad bond.....	1,000.00
	<hr/>
	\$150,500.00

KIMBALL FUND.

(Legacy of Jacob Kimball, of Hampstead.)

This fund is held in trust by the state, in accordance with an act of the legislature, approved

1845	\$6,753.49
------------	------------

LOW FUND.

(Legacy of Abiel Low, of Brooklyn, N. Y.)

3	Columbus bonds	\$3,000.00
2	Chicago bonds	2,000.00
		<hr/>
		\$5,000.00

PENHALLOW FUND.

(Legacy of H. Louise Penhallow, of Portsmouth.)

1	Concord & Montreal Railroad bond.....	\$1,000.00
---	---------------------------------------	------------

PIPER FUND.

(Legacy of Rhoda C. Piper, of Hanover.)

1	share Union National Bank stock.....	\$100.00
---	--------------------------------------	----------

PLUMMER FUND.

(Legacy of William Plummer, of Londonderry.)

5	shares First National Bank of Nashua stock..	\$500.00
---	--	----------

RICE FUND.

(Legacy of Arabella Rice, of Portsmouth.)

4	New Hampshire Trust Company bonds (55 per cent paid)	\$1,800.00
5	Oregon Short Line Railroad bonds.....	5,000.00
1	Old Colony Railroad registered bond.....	3,000.00
1	Chicago & Northwestern Railroad bond.....	1,000.00
1	United States registered bond.....	5,000.00
3	Old Colony Railroad bonds.....	3,000.00
1	Concord & Montreal Railroad bond.....	1,000.00
		<hr/>
		\$19,800.00

RUMFORD FUND.

(Legacy of the Countess of Rumford, of Concord.)

5	Concord & Montreal Railroad bonds.....	\$5,000.00
5	Philadelphia, Wilmington & Baltimore Railroad bonds	5,000.00

30 shares Pittsburg, Fort Wayne & Chicago Railroad stock	\$3,000.00
20 shares Boston & Providence Railroad stock..	2,000.00
	<hr/>
	\$15,000.00

SHERMAN FUND.

(Legacy of Mrs. Fanny S. Sherman, of Exeter.)

3 Iowa Loan & Trust Company bonds.....	\$3,000.00
1 St. Louis County bond.....	1,000.00
1 Old Colony Railroad bond.....	1,000.00
	<hr/>
	\$5,000.00

SMITH FUND.

(Legacy of Betsey F. Smith, of New Ipswich.)

5 shares First National Bank of Nashua stock...	\$500.00
---	----------

SPALDING FUND.

(Legacy of Isaac Spalding, of Nashua.)

6 Concord & Montreal Railroad bonds.....	\$6,000.00
2 Boston & Providence Railroad bonds.....	2,000.00
1 Boston & Lowell Railroad bond.....	1,000.00
1 Old Colony Railroad bond.....	1,000.00
	<hr/>
	\$10,000.00

SPRING FUND.

2 shares First National Bank of Nashua stock...	\$200.00
---	----------

WALKER FUND.

(Legacy of Abigail B. Walker, of Concord.)

15 shares First National Bank of Nashua stock..	\$1,500.00
25 shares State National Bank stock.....	2,500.00
1 Boston & Lowell Railroad bond.....	1,000.00
1 Salt Lake City bond.....	1,000.00
5 Boston & Maine Railroad bonds.....	5,000.00
4 Old Colony Railroad bonds.....	4,000.00
	<hr/>
	\$15,000.00

WILLIAMS FUND.

(Gift of John Williams, of Hanover.)

2 shares Railroad National Bank stock..... \$200.00

These twenty-two permanent funds amount, at their par value, to three hundred and one thousand eight hundred and thirty-one dollars and ninety-two cents (\$301,831.92).

In addition to these, there are in the hands of the financial agent five New Hampshire Trust Company bonds of the par value of four thousand dollars, now in process of liquidation. From these, twenty-two hundred dollars of principal and accruing interest has been received and carried to general cash account.

The unpaid balance of the principal of the debt of twelve thousand dollars, incurred for finishing and furnishing the Twitchell building and for the introduction of fireproof ventilators to the attics of the hospital buildings, has been paid during the last year.

Respectfully submitted.

JOSEPH B. WALKER,

Financial Agent.

CONCORD, N. H., November 12, 1902.

I hereby certify that I have examined the foregoing report of the receipts and expenditures of J. B. Walker, financial agent of the New Hampshire State Hospital, from October 1, 1901, to September 30, 1902, inclusive, and find the same correctly cast and satisfactorily vouched. I have also compared the foregoing schedule of the securities of the hospital with the securities in his hands, and find the same to agree in all particulars.

W. F. THAYER,

Auditor.

CONCORD, N. H., November 14, 1902.

AUDIT OF ACCOUNTS.

MADE BY THE BANK COMMISSIONERS DECEMBER 2, 1902.

STATE OF NEW HAMPSHIRE.

OFFICE OF BOARD OF BANK COMMISSIONERS,

CONCORD, December 10, 1902.

To His Excellency the Governor and the Honorable Council:

SIRS,—Upon receipt of a communication from the honorable the secretary of state, notifying the bank commissioners of the passage by your honorable body of the following vote: "That the bank commissioners be directed to audit the accounts of the New Hampshire State Hospital and make an examination of the financial condition of that institution,"—communicated to us on November 11, 1902, and in compliance with chapter 86, Laws of 1897, the board proceeded to audit the accounts of the treasurer of the hospital and those of the financial agent for the two annual periods ending September 30, 1901, and September 30, 1902, comprising all the accounts of the trustees and the agents appointed by them that are required to be audited by the bank commissioners; and they herewith submit the following report:

TREASURER'S REPORT.

RECEIPTS.

Receipts from October 1, 1900, to September 30, 1901, as shown by the books of the treasurer:

Balance on hand as found by the bank commissioners at their examination of 1900.....	\$93.02
From private patients for board and attendance	49,937.59

From the several counties of the state having indigent patients at the hospital, as follows:

Belknap	\$212.02	
Carroll	447.75	
Cheshire	610.19	
Coös	415.62	
Grafton	24.61	
Hillsborough	1,961.13	
Merrimack	574.24	
Rockingham	720.94	
Strafford	5,639.92	
Sullivan	487.25	
	<hr/>	\$11,093.67

From towns in the state having indigent patients at the hospital for which they are chargeable, as follows:

Canaan	\$5.00	
Charlestown	213.73	
Conway	211.59	
Dover	98.72	
Fitzwilliam	212.21	
Hanover	20.47	
Jefferson	20.54	
Keene	378.87	
Laconia	273.89	
Lyme	83.54	
Marlborough	262.86	
Nashua	112.71	
Plymouth	224.38	
Rochester	208.73	
Salisbury	104.74	
Somersworth	209.98	
Strafford	151.19	
Sullivan	33.42	
Tilton	231.80	
	<hr/>	3,064.37

From the state treasurer for the support of insane persons who have been inmates of the hospital for twenty years

4,370.92

From the state treasurer for the support of convict insane, committed to the hospital by order of the court	\$6,006.73
From the state treasurer for the support of indigent insane patients, ordered to the New Hampshire State Hospital by the commission of lunacy	16,107.80
The annual appropriation by the state for the support at the hospital of such indigent insane persons belonging to the state as the governor may from time to time designate.....	6,000.00
The annual appropriation by the state for the hospital library	100.00
From the John Conant fund, for the support of indigent patients, preference being given to those from the town of Jaffrey.....	316.00
From the Isaac Adams fund, for the payment of a suitable person to manage the workshop erected for the manufacture of brooms and mattresses	180.00
From income of bequests and trust funds held by the trustees	8,000.00
Incidental appropriations, as made by trustees..	500.00
From the sale of articles, being chiefly the surplus manufacture of the broom and mattress shop	1,931.22
From money borrowed for purchase of coal.....	3,290.07
Sundry receipts	173.81
	<hr/>
	\$111,165.20

EXPENDITURES.

Expenditures from October 1, 1900, to September 30, 1901, as shown by the books, and for which proper vouchers were exhibited:

For provisions	\$31,772.52
house furnishings	3,925.94
articles purchased and charged to patients..	5,044.09
lighting	2,842.84
heating and cooking	9,206.30

Services, superintendent and treasurer	
for nine months.....	\$2,250.00
first assistant physician.....	1,500.00
second assistant physician...	1,000.00
all other employees	23,945.61
	<hr/>
	\$28,695.61
For medical supplies	1,041.41
ordinary repairs	7,269.61
expenses of farm and provender.....	9,639.78
permanent improvements	2,736.11
expenses of trustees	73.60
public exercises	593.94
general expense	5,055.34
stationery, postage, and express.....	1,017.79
	<hr/>
	\$108,914.88
Receipts during this period.....	\$111,165.20
Less expenditures	108,914.88
	<hr/>
Balance to credit this account October 1,	
1901	\$2,250.32

RECEIPTS.

Receipts from October 1, 1901, to September 30, 1902:

Balance on hand	\$2,250.32
From private patients for board and attendance	46,868.06
From the several counties of the state having indi- gent patients at the hospital, as follows:	
Belknap	\$226.21
Carroll	329.50
Cheshire	809.18
Coös	157.67
Grafton	42.06
Hillsborough	1,587.75
Merrimack	7,823.25
Rockingham	533.54
Strafford	5,031.90
Sullivan	126.59
	<hr/>
	17,267.65

From towns in the state having indigent patients
at the hospital for which they are chargeable, as
follows:

Amherst	\$17.75	
Andover	257.54	
Canaan	8.97	
Charlestown	229.58	
Conway	212.53	
Danville	47.00	
Enfield	24.25	
Exeter	94.10	
Fitzwilliam	157.12	
Hanover	55.01	
Jefferson	43.53	
Keene	437.45	
Laconia	179.40	
Lebanon	180.37	
Manchester	100.50	
Marlborough	211.93	
Nashua	348.06	
Plymouth	215.23	
Rochester	141.78	
Somersworth	105.22	
Strafford	104.86	
Tilton	63.61	
	<hr/>	\$3,235.79
From the state treasurer for the support of insane persons who have been inmates of the hospital for twenty years		4,219.64
From the state treasurer for the support of con- vict insane, committed to the hospital by order of the court		5,192.94
From the state treasurer for the support of indi- gent insane patients, ordered to the New Hampshire State Hospital by the commission of lunacy		15,206.49

The annual appropriation by the state for the support at the hospital of such indigent insane persons belonging to the state as the governor may from time to time designate.....	\$6,000.00
The annual appropriation by the state for the hospital library	100.00
From the John Conant fund, for the support of indigent patients, preference being given to those from the town of Jaffrey.....	267.25
From the Isaac Adams fund, for the payment of a suitable person to manage the workshop erected for the manufacture of brooms and mattresses	180.00
From income of bequests and trust funds held by the trustees	8,000.00
Incidental appropriations, as made by the trustees	500.00
From the sale of articles, being chiefly the surplus manufacture of the broom and mattress shop	1,493.96
Sundry receipts	320.97
	<hr/>
	\$111,103.07

EXPENDITURES.

Expenditures from October 1, 1901, to September 30, 1902, as shown by the books, and for which proper vouchers were exhibited:

For provisions	\$27,958.68
house furnishings	4,435.32
articles purchased and charged to patients..	6,387.86
lighting	2,804.47
heating and cooking	9,294.84
medical supplies	969.34
Services, superintendent and treasurer \$3,000.00	
first assistant physician....	1,500.00
second assistant physician..	1,000.00
all other employees.....	24,830.43
	<hr/>
	30,330.43

For ordinary repairs	\$6,749.55
permanent improvements	4,794.84
expenses of farm and provender.....	9,767.31
stationery, postage, and express.....	1,565.00
expenses of trustees.....	71.70
public exercises	854.60
Cash on hand October 1, 1902.....	5,119.13
	<hr/>
	\$111,103.07

FINANCIAL AGENT'S ACCOUNT.

RECEIPTS.

Receipts from October 1, 1900, to September 30, 1901, inclusive, as shown by the books of the financial agent:

Cash on hand, as found by the bank commission- ers at their examination of 1900.....	\$1,663.68
From securities exchanged or sold.....	10,659.00
Interest and dividends.....	16,448.25
Taxes refunded	225.00
	<hr/>
	\$28,995.93

EXPENDITURES.

Expenditures from October 1, 1900, to September 30, 1901, inclusive, as shown by the books, and for which proper vouchers were exhibited:

Cash paid treasurer of hospital for support of indigent insane	\$8,000.00
paid treasurer of hospital, income of Conant fund	316.00
paid treasurer of hospital, income of Adams fund	180.00
paid New Hampshire Savings Bank, note..	4,500.00
paid New Hampshire Savings Bank, inter- est on note	515.00
paid J. B. Walker, salary	800.00
paid for insurance	961.30

Cash paid for miscellaneous expenses	\$79.09
paid for surety bonds	75.00
paid for securities exchanged or purchased	9,371.17
Cash on hand	4,197.37
	<hr/>
	\$28,995.93

RECEIPTS.

Receipts from October 1, 1901, to September 30, 1902, inclusive, as shown by the books of the financial agent:

Cash on hand October 1, 1901.....	\$4,197.37
From securities exchanged or sold.....	43,721.62
Interest and dividends	14,407.28
Rights sold	1,285.63
Rebate on cash payments	180.50
	<hr/>
	\$63,792.40

EXPENDITURES.

Expenditures from October 1, 1901, to September 30, 1902, inclusive, as shown by the books, and for which proper vouchers were exhibited:

Cash paid treasurer of hospital for support of indigent insane	\$10,000.00
paid treasurer of hospital, income of Conant fund	346.25
paid treasurer of hospital, income of Adams fund	180.00
paid treasurer for improvement of hospital grounds	1,000.00
paid New Hampshire Savings Bank, note..	3,000.00
paid New Hampshire Savings Bank, inter- est on note	84.59
paid for insurance	1,023.85
paid J. B. Walker, salary	800.00
paid for land purchased.....	200.00
paid Mrs. J. H. Carr.....	50.00
paid for surety bond.....	40.00

Cash paid for miscellaneous expenses.....	\$87.41
paid for securities exchanged or purchased	38,703.25
for interest on securities purchased.....	85.58
on deposit in Mechanics' National Bank, Concord	8,191.47
	<hr/>
	\$63,792.40

The commissioners repeat what was said by them at their last audit in December, 1900, as to an apparent discrepancy between the accounts of the financial agent and those of the superintendent and treasurer as to the amount paid by the financial agent to the treasurer of the hospital in each year, growing out of a difference in the actual time when each closes his yearly account. These accounts are reconciled by us in the same manner as two years ago, by the omission from the financial agent's account of the first two items in 1900,—one of which is an item of \$2,000 for the support of indigent insane, and the other, \$79, in the Conant fund, as belonging to the previous year. It is hoped some method will be adopted by the trustees of the hospital which will do away with the recurrence of these seeming discrepancies.

There is a further apparent discrepancy between the amounts shown to have been received by the hospital treasurer from the state treasurer and those shown by the published report of the latter, owing to the fiscal year not covering the same period in each department, allusion to which was made by us in our report of audit in 1900.

Any attempt to reconcile financial differences shown to exist between different departments of the state is made difficult, because the fiscal year in the several departments does not cover the same period. The same difficulty is met with in our verification of the receipts by the treasurer from the various counties and towns making payments to the hospital.

The commissioners have examined the securities in the hands of the financial agent in which the several trust funds belonging to the hospital are invested, and find the same to correspond with the statement as published by the bank com-

missioners in 1898, after accounting for changes and the purchase of new investments as authorized by the governor and council.

Four new funds have been created since the statement of the commissioners of 1898. In the early days of the asylum there was but little trust money to care for, the Fisk and Kimball funds being in the possession of the state. The trustees of the asylum passed a vote that every donation amounting to one hundred dollars should thereafter be kept as a distinct fund. The financial agent has, as opportunity occurred, placed to the credit of any funds of which he had knowledge securities amounting at their face value to the original donation.

John Williams of Hanover a long time ago gave the sum of two hundred dollars to the asylum. This money has now been invested in two shares of the Union National Bank of Lowell, and is kept distinct as the Williams fund.

Mrs. Susan W. Creighton of Newmarket bequeathed to the asylum the sum of three thousand dollars without any condition for its expenditure. This fund is invested in a one thousand dollar 4 per cent bond of the Boston & Providence Railroad and in two one thousand dollar 4 per cent bonds of the Boston & Maine Railroad.

William Plummer of Londonderry, formerly one of the trustees of the asylum, bequeathed to it the sum of five hundred dollars. This fund has been invested in five shares of the First National Bank of Nashua.

A spring of water upon the land of the asylum was sold for two hundred dollars, representing so much real estate. This sum has been invested in two shares of the First National Bank of Nashua.

SPECIAL APPROPRIATIONS.

Of the appropriation of \$50,000 in 1899, there was a balance in the hands of the treasurer on September 30, 1901, unexpended, of.....	\$738.90
Vouchers have been exhibited for the balance of this appropriation, amounting to.....	738.90

An appropriation of \$15,000 was made by the legislature of 1901. See chapter 31, Laws of 1901.

There has been received from the state treasurer	\$15,000.00
Vouchers for payments from this appropriation	
have been exhibited, amounting to.....	13,657.45

Leaving an unexpended balance in the hands	
of the treasurer of the hospital of.....	\$1,342.55

Respectfully submitted.

ALPHEUS W. BAKER,
JOHN HATCH,
GEO WAIT CUMMINGS,
Bank Commissioners.

REPORT OF THE TREASURER OF THE BUILDING COMMITTEE

IN ACCOUNT WITH LEGISLATIVE APPROPRIATION
FOR YEAR 1901.

RECEIPTS.

Cash received of state treasurer..... \$15,000.00

EXPENDITURES.

Paid C. L. Fellows & Company, iron stairway in bakerly	\$1,500.00
C. L. Fellows & Company, tile flooring....	321.20
plumbing stock	70.09
C. L. Fellows & Company, brick fire escape and iron stairway	2,000.00
George E. Gilchrist Company, plumbing stock in administration building.....	272.59
labor on plumbing in administration build- ing	288.93
C. L. Fellows Company, contract bakery...	267.67
C. L. Fellows Company, contract bakery...	1,400.00
Bailey Oven Company, bakers' oven.....	550.00
C. L. Fellows & Company, bakery contract plumbing stock, administration building and bakery	381.00
Chadwick Boston Lead Company, lead pipe connecting farmer's house.....	539.57
George Abbott, Jr., painting Kent and ad- ministration buildings, ceilings and floors	66.53
E. B. Hutchinson Building Co., steel ceil- ing and hard pine floors for Kent and administration buildings	280.37
	796.42

Paid J. L. A. Chellis, contract farmer's cottage...	\$2,382.00
E. Brewer & Company, flour elevator for bakery	148.56
C. H. McKenna & Company, electric fix- tures, farmer's cottage	44.25
M. L. Clifford & Company, range connec- tion, farmer's cottage	7.87
T. W. Landon & Company, connecting elec- tric light mains in farmer's cottage....	6.00
Fred Rollins, papering farmer's cottage...	38.25
Rowell & Plummer, mason work, farmer's cottage	21.90
C. L. Fellows & Company, connecting farm- er's cottage with city sewer.....	69.00
Giles Wheeler, architect's plans.....	20.00
Union Machine Company, food elevators...	124.00
C. L. Fellows & Company, fireproof elevator well, Rumford wing	683.75
C. L. Fellows & Company, fireproof elevator well, Peaslee wing	693.75
C. L. Fellows & Company, fireproof elevator well, administration building.....	683.75
C. L. Fellows & Company, fireproof elevator well, Chandler wing	683.75
Bailey Oven Company, new kitchen oven..	575.00
New Hampshire State Hospital, for carpen- ter's services	83.80
Total	<hr/> \$15,000.00

GENERAL EXHIBIT.

PRODUCTS OF THE FARM AND GARDEN AT MARKET VALUE FOR THE YEAR 1901.

Asparagus	225	bunches at	\$0.10	\$22.50
Rhubarb	4,000	bunches	.01	40.00
Lettuce	5,000	heads	.03	150.00
Cucumbers	120	dozen	.15	18.00
Peas	50	bushels	1.60	80.00
Spinach	100	bushels	.40	40.00
String beans	30	bushels	.80	24.00
Shell beans	28	bushels	1.00	28.00
Pickling cucumbers	16	bushels	1.50	24.00
Tomatoes (ripe) ...	50	bushels	1.00	50.00
Tomatoes (green) ..	15	bushels	.75	11.25
Sweet corn	300	dozen	.12	36.00
Early cabbage	1,000	heads	.04	40.00
Winter cabbage ...	500	heads	.08	40.00
Beets	150	heads	.50	75.00
Potatoes	481	heads	.80	384.80
Small potatoes	30	bushels	.20	6.00
Late celery	1,000	heads	.05	50.00
Early celery	2,000	heads	.05	100.00
Onions	600	bushels	.80	480.00
Carrots	63	bushels	.40	25.20
Parsnips	130	bushels	.50	65.00
Grass for soiling...	115	tons	2.00	230.00
Ensilage corn	350	tons	3.00	1,050.00
Corn for soiling ...	60	tons	2.00	120.00
Rye for soiling	42	tons	2.00	84.00
Hay	60	tons	18.00	1,080.00
Milk produced	123,367	quarts	.04	4,934.68
Beef for use	4,299	pounds	.08½	365.41

Pork for use	12,805	pounds	\$0.07	\$896.35
	2,210	pounds	.06	132.60
Calves sold	30			45.25
Hogs sold				238.20
Hungarian soiling..	20	tons	2.00	40.00
Rowen	25	tons	2.00	50.00
Ice for use	3,769	cakes	.04	150.76
Ice sold	2,436	cakes	.04	97.44
Hides sold	7			38.00
Pigs sold	60			165.00
				<hr/>
				\$11,507.44

PRODUCTS OF THE FARM AND GARDEN AT PINEHURST FOR
THE YEAR 1901.

Cauliflower	50	heads at	\$0.15	\$7.50
Citron	52		.15	7.80
Corn	185	dozen	.12	22.20
Shell beans	72	quarts	.10	7.20
Potatoes	72	bushels	.70	50.40
Carrots	18	bushels	.40	7.20
Tomatoes	7	bushels	1.00	7.00
Watermelons	390			39.00
Cantaloupe	94		.05	4.70
Radishes	298	dozen	.05	14.90
Lettuce	14	dozen	.36	5.04
Turnips	211	bushels	.85	179.35
Peas	7	bushels	1.60	11.20
Beans	7	bushels	1.00	7.00
Beets	9	bushels	.50	4.50
Cucumbers	204	dozen	.15	30.60
Cabbage	412	heads	.08	32.96
Squash	18	dozen	.50	9.00
Hay	12	tons	18.00	216.00
Honey	104	pounds	.20	20.80
Milk	3,580	quarts	.04	143.20
Corn	3	tons	2.00	6.00

Strawberries	1,070	quarts	\$0.10	\$107.00
Parsnips	6	bushels	.50	3.00
				<hr/>
				\$943.55
Products of farm and garden.....				11,507.44
				<hr/>
				\$12,450.99

PRODUCTS OF THE FARM AND GARDEN AT MARKET VALUE FOR
THE YEAR 1902.

Asparagus	600	bunches at	\$0.10	\$60.00
Rhubarb	7,300	pounds	.01	73.00
Lettuce	7,000	heads	.03	210.00
Cucumbers	900	dozen	.15	135.00
Peas	60	bushels	1.60	96.00
Winter squash	30	tons	20.00	600.00
Summer squash ...	25	bushels	1.00	25.00
Spinach	190	bushels	.40	76.00
String beans	47	bushels	.80	37.60
Shell beans	8	bushels	1.00	8.00
Pickling cucumbers	42	bushels	1.50	63.00
Tomatoes (ripe) ...	130	bushels	1.00	130.00
Tomatoes (green) ..	56	bushels	.75	42.00
Sweet corn	500	dozen	.12	60.00
Early cabbage	1,000	heads	.04	40.00
Winter cabbage ...	4,500	heads	.05	225.00
Beets	559	bushels	.50	279.50
Potatoes	30	bushels	.80	24.00
Small potatoes	30	bushels	.20	6.00
Late celery	574	heads	.05	28.70
Early celery	641	heads	.05	32.05
Onions	584	bushels	.80	467.20
Carrots	111	bushels	.50	55.50
Parsnips	108	bushels	.50	54.00
Grass for soiling...	75	tons	2.00	150.00
Ensilage corn	225	tons	3.00	675.00
Corn for soiling....	25	tons	2.00	50.00

Rye for soiling....	30	tons	\$2.00	\$60.00
Hay	60	tons	18.00	1,080.00
Milk produced	125,780	quarts	.04	5,031.20
Beef for use	4,910	pounds	.08½	417.35
Pork for use	16,729	pounds	.08	1,338.32
Calves sold	23			42.75
Hogs sold				42.50
Rowen	30	tons	2.00	60.00
Ice for use	3,769	cakes	.04	150.76
Ice sold	2,436	cakes	.04	97.44
Hides sold	7			75.00
Pigs sold	43			141.00
				<hr/>
				\$12,238.87

PRODUCTS OF THE FARM AND GARDEN AT PINEHURST FOR
THE YEAR 1902.

Cauliflower	54	heads at	\$0.15	\$8.10
Corn	136	dozen	.12	16.32
Shell beans	76	quarts	.10	7.60
Potatoes	26	bushels	.70	18.20
Carrots	9	bushels	.40	3.60
Tomatoes	11	bushels	1.00	11.00
Cantaloupe	16		.05	.80
Radishes	178	dozen	.05	8.90
Lettuce	250	dozen	.36	90.00
Turnips	39	bushels	.85	33.15
Peas	21	bushels	1.60	33.60
Beans	12	bushels	1.00	12.00
Beets	10	bushels	.50	5.00
Cucumbers	193	dozen	.15	28.95
Cabbage	300	heads	.08	24.00
Hay	11	tons	18.00	198.00
Honey	54	pounds	.20	10.80
Milk	3,493	quarts	.04	139.72
Corn	4	tons	2.00	8.00
Strawberries	640	quarts	.10	64.00

REPORT OF STATE HOSPITAL.

91

Parsnips	8 bushels	\$0.50	\$4.00
Apples	16 barrels	1.25	20.00
			<hr/>
			\$445.44
Products of farm and garden			12,238.87
			<hr/>
			\$12,984.61

WORK DONE IN SEWING ROOM FOR YEAR ENDING SEPTEMBER
30, 1901.

Sheets	625
Pillow slips	568
Table covers	58
Napkins	168
Towels	1,074
Mattresses	30
Pillow ticks	28
Comforters	8
Curtains	159
Stand covers	131
Sofa pillows	12
Laundry bags	8
Horse blankets	8
Carpets	13
Rugs	50
Dresses	101
Skirts	49
Waists	6
Cape	1
Aprons	51
Bibs	12
Chemises	5
Corset covers	9
Days' work, miscellaneous	434

WORK DONE IN SEWING ROOM FOR YEAR ENDING SEPTEMBER
30, 1902.

Sheets	709
--------------	-----

Pillow slips	802
Towels	1,028
Table cloths	111
Napkins	250
Mattresses	55
Pillow ticks	41
Curtains	287
Stand cloths	135
Laundry bags	25
Carpets	6
Rugs	50
Dresses	104
Skirts	87
Chemises	2
Aprons	34
Sofa pillows	6
Bibs	5
Waists	9
Days' mending	411
Horse blankets	2
Camisoles	3

PRESERVES MADE IN KITCHEN FOR YEAR ENDING SEPTEMBER
30, 1902.

Rhubarb	435 gallons.
Tomatoes	158 "
Piccalilli	135 "
Blueberries	28 "
Strawberries	25 quarts.
Currants	9 "
Crab-apples	29 "
Gooseberries	13 "
Jelly	35 tumblers.
Crab-apple jelly	38 "
Pickles	10 barrels.

MILK RECORD.

MILK RECORD FOR YEAR

NUMBER OF COWS.	1900.			1901.		
	October.	November.	December.	January.	February.	March.
1.	531½	480½	394	64		132½
2.	637½	536	406	183		694½
3.	29½	746½	700	674	536½	484
4.	633½	585½	652½	645	450	41
5.	98					
6.	685½	637	701	720	593½	449½
7.	512	431	362½	677½	636	626½
8.	706½	626½	597	490½	291	25
9.	371	217		695½	615½	548
10.	273	614½	671	692	575	563
11.	585½	527½	560½	535½	275½	
12.	645½	668	733	696	540½	451½
13.						
14.				896½	842	732
15.	578	509	494	471½	419	445
16.	517	828½	914	882	692½	633½
17.			905	898	681	645
18.	376	331½	366½	373½	307½	265
19.	459½	406½	388	391	264½	547
20.	767½	638	683	698	562½	380
21.	720	656½	687	675	483	235
22.	162½		380½	1,082	821½	731½
23.				792½	801	717½
24.	655	635½	665½	626	357½	211
25.	663½	405	104			639
26.			997½	904	679	591½
27.	329	153		375½	787	719½
28.	519	520	560½	566	480	503
29.	428	289½	346			700
30.	575½	481½	413	43½		390½
31.	414½	372	89	436½	649½	661½
32.	609	738½	688	716	623½	597
33.	694½	596	660	664	546½	497½
34.	627	538½	405	131		
35.	531	505	512½	490½	359	88
36.	283	959	958	965	783½	793½
37.	652½	613	661	672	534	405½
38.	723	685	752½	731½	539½	345
39.	742	615	641	581	457½	239
40.	686½	638½	741½	722½	540	390
41.	819	724	704½	692	538½	485½
42.	177½					
43.						
44.						
45.	40	725½	682½	580½	331½	39½
46.						
47.	589½	566	667½	710	610	616½
48.						
49.	524	468	481	499½	400½	384½
50.	471	421	355½	204½	32	
51.						
52.				685½	623½	538½
53.						
54.	530	487	526	524½	247½	
55.						
56.	552½	486½	399½	200	14	
57.						
58.						
59.	603	534	540	562½	474½	451½
60.						
Total.....	22,729	22,597	24,156	26,559	20,996½	19,634½

ENDING SEPTEMBER 30, 1901.

1901.						
April.	May.	June.	July.	August.	September.	Total.
849½	210½	917	815	741½	632½	5,768½
845½	737½					4,040
377	353½	339	215	16½	366	4,837½
492	973½	961	920	822	669½	7,845½
137					34½	98
565	603	552½	434½	279	152½	3,958
404½	969	895	815½	694	505½	5,832
473½	565	583½	450½	208½	62	7,110
522	641½	570	427	277	55	4,790
				713½	746	5,881
376	699½	759½	745	688	605	3,944
						7,607½
613	744	756	685	643	517	6,428½
318½	204			697½	714½	4,851
546	629	606	337½	303½	84½	6,974
516½	600	498½	327½	56	353	5,480½
34	352	623				3,029
520½	549½	503	471	421½	366	5,288
118½	2½					3,850
7½	490	1,025½	950	819	716	7,464½
640	775	819	747½	652	572	7,392½
616	758	725	515½	361½	254½	5,541½
107½	2		993	913½	779	5,945½
753	923½	840½	751½	618½	552½	6,251
503	555½	459½	84			4,771
611	690	686	609	533½	444	5,937½
449½	536	548½	502	439	391½	6,015
949½	1,006	974	891	751½	591½	6,969
692	758	745	715	702½	611½	6,128
573½	709½	700½	632½	534½	462½	6,236
392	297	78	146½		708½	5,504
465½	623	670	492½	532	435	6,876½
	760½	855½	75½	684½	613	5,372½
82	969½	880	768	649	538½	6,373
688	820	805	718	527	372	8,672
212	4½	32	938	788	665½	6,179
68			794	889½	772	6,300
56		231	998	769	690½	6,020
232½	9½	98½		250	441½	4,731
206½	2½		314	762½	669	5,918
						177½
		685	742	721½	610½	5,158½
491½	419½	81½				4,752
319½	316	170		550	589	4,662
318½	946	797	689	597½	491½	5,323½
477½	534½	442½	302	77½		3,681½
						2,315
182½	1,004	1,041½	894	731½	618	6,124
402	454½	423½	276½	22½		4,744½
18,205½	23,198½	23,356½	22,864½	21,309	19,543	265,239

One quart, 2.15 pounds. Total for year in pounds, 265,239; total for year in quarts, 123,367. Average per cow in quarts, 3,008; average per day in quarts, 8.2; average number of cows milked daily, 41 1-6.

MILK RECORD FOR YEAR

NUMBER OF COWS.	1901.			1902.		
	October.	November.	December.	January.	February.	March.
1.....	699	657½	565½	532½	426½	302
2.....		548	677½	644	549	621
3.....	643½	528	525½	510½	394½	347½
4.....	718½	625	617½	594	567	680½
5.....		685	803½	694	634½	726
6.....	510½	471½	456	420½	361½	431½
7.....		344½	813½	774½	669	684
8.....	595½	432½	302	238½	46	
9.....		456	763	669½	523	519½
10.....	370½	937	918½	851½	677½	730½
11.....	703	637½	607½	532½	452	472
12.....	576	487	440½	450½	356	365
13.....						
14.....	513	341	215	85½		118
15.....	727	564½	485	483½	434½	423
16.....		279½	866	722½	597½	763
17.....	581½	486½	441	421½	367	419
18.....	543½	560	521	508½	472½	548½
19.....	341	81	469	678	550	528
20.....			169	990½	783	778½
21.....	705	627	526½	501½	397	260½
22.....	609	505	413	225	40½	
23.....	21½		832½	719½	557½	668
24.....	815½	757½	686½	675½	573	634
25.....	622	541	394	251	28	
26.....						
27.....	419	301½	54			592
28.....	417	249½	35			540
29.....	609	441½	59½			1,149½
30.....	661	577½	532½	546½	504½	574
31.....	484	409	362	30½		472
32.....	855	643½	648½	642	548	508½
33.....	454½	432	386	422½	318	212½
34.....	629	539	438½	365	239½	129
35.....	557	454½	389½	415½	368½	400½
36.....	264½	328	581½	564½	508½	576
37.....	717	606½	513½	538½	495	598½
38.....	830½	798	761½	730	648½	696
39.....	677	616½	586	585½	482	495
40.....	454	393	396½	382½	341	379½
41.....	647½	536½	480	477½	436	403½
42.....						
43.....						
44.....						
45.....	655½	560½	514½	534	474½	521
46.....						
47.....	745½	406½	406½	406	345½	403½
48.....						
49.....	589½	484	447	457	408½	390
50.....	503½	491	435½	412	170	5½
51.....						
52.....			597	682½	533½	588½
53.....						
54.....						
55.....						
56.....	694	653½	511	478	349	134
57.....						
58.....						
59.....			541	684	611	674½
60.....						
Total.....	22,225½	21,463½	23,186	22,529	18,238½	21,463½

ENDING SEPTEMBER 30, 1902.

1902.						
April.	May.	June.	July.	August.	September.	Total.
117			447	961½	849	5,557½
561	577½	575½	497	392½	125½	5,768½
182			177	1,037	889½	5,235
658	669	649	596½	349		6,724
678½	716	729	582½	337½		6,586½
213½	844½	814	734	669½	594½	6,521½
659½	693½	685½	691	600½	464½	7,080
427	861½	802	800	820½	77½	6,100
480½	476	424	309	19		4,639½
638½	632	576	432½	149		6,913½
313½	99	150½	1,030½	1,022½	881	6,901½
275½	197	744	754	756½	740	6,142
836	724	680½	661	681	712½	5,567½
310½	272½	155		707½	889½	5,452½
586½	609	589	597½	584	447	6,041½
387½	403	404½	395½	337	152	4,796
496½	465	439	350	42	381½	5,307
477	458½	528½	560½	578	525	5,774½
654	722	751½	725	657	548	6,778½
	106½	900	876	894	822	6,616
327	883	799	773½	774½	716½	6,066
620½	618	652½	650½	640	611½	6,592
580½	584	635½	671½	668½	652	7,934
30	761½	759½	793	809½	750	5,739½
		738½	773	766	708½	2,987
688	558	506½	511			3,690
876½	821½	753	742	738½	644½	5,817½
1,037½	935	871	831½	790	700	7,424½
574½	644½	608½	646½	639½	517½	7,027
644	545	563½	551½	577½	495½	5,134½
321½	118½			637½	994½	5,017½
76		664½	1,096½	1,013½	869	5,945
	511	442½				3,293½
360	299	210		401	682½	4,541
510½	439½	365½	148	81½	1,041½	5,409½
630½	613	634	637½	669½	653	7,306½
574	484	286	1½		676	6,486
297	101	272	978	935½	807½	6,833
370	390½	409½	429	442½	390½	4,784½
181			176½	978½	833	5,150
		733½	818½	851	747½	3,150½
450½	389½	214		258	854½	5,426½
293½	717	658½	687	646½	601	6,316
		152½	468½	442	406½	4,246½
			715½	759½	699½	4,258
557½	729	682	656½	557½	432	6,046
						2,819½
473						2,988½
19,455	20,665	23,271½	24,973½	26,676½	26,280½	270,428

One quart, 2.15 pounds. Total for year in pounds, 270,428; total for year in quarts, 125,780. Average per cow in quarts, 3,067; average per day in quarts, 8.4; average number of cows milked daily, 41 5-12.

APPENDIX.

APPENDIX.

DIRECTIONS CONCERNING ADMISSION.

Those wishing the admission of a person to the hospital should make application to the superintendent previously to bringing the patient, unless the urgency of the case precludes it.

On application, full information, as to terms, conditions, etc., and the necessary papers will be furnished.

With the application, a brief statement of the case should be given.

Some person should accompany the patient who can give a correct history of the case, if possible.

On no account should deception be practiced. The necessity of this step and the arrangements having first been settled, the patient should be honestly informed of what is to take place.

When possible it is better that patients should arrive in day trains.

Patients should not bring valuable property when committed, and the hospital cannot become responsible for its keeping. Such articles should be left at home, unless the patient is fully responsible for their care.

The parties committing a patient, whether private individuals or town officers, are required to give a bond for the payment of expenses in the annexed form, signed by two responsible persons. The certificates of physicians should be filled and signed in all cases, except those committed by courts, and be written in the annexed form.

FORM OF BOND.

In consideration of the admission of _____, of the
town of _____, in the county of _____, and

state of _____ as a boarder at the New Hampshire State Hospital, in the city of Concord, we, _____ of the town of _____, in the county of _____, and state of _____, and _____, of the town of _____, in the county of _____, and state of _____, jointly and severally promise to agree to and with said New Hampshire State Hospital, to pay its treasurer _____ dollars and _____ cents per week, or such other rate as may from time to time be established by said hospital therefor, while he shall remain at said hospital; together with such extra charge as may be occasioned by _____ requiring more than the ordinary care and attention; to pay any reasonable charge for actual damage done by _____ to buildings or furnishings; to assist in returning _____ to said hospital in case of escape; to remove _____ from said hospital when required to do so by the superintendent; to pay funeral charges in case of death; and not to hold said hospital responsible for any money, jewelry, watches, or other valuables in _____ possession on admission or given to _____ afterwards.

Payments to be made quarterly, and interest on all sums not paid at the end of each quarter.

Witness our hands this _____ day of _____, 190 .

Attest:

Principal. [L. S.]

Surely. [L. S.]

NOTE.—Those committing patients are requested to notice the condition in regard to money, jewelry, etc.

FORM OF PETITION.

To be filled and signed by those desiring aid from the state appropriation, to be sent to the superintendent.

To His Excellency, the Governor of the State of New Hampshire:

Respectfully represents that _____, an insane person, resident of _____, in this state, is without sufficient property or relatives legally liable for _____ support at the New Hampshire State Hospital. Wherefore, the undersigned

prays that the said _____ be aided by any funds appropriated by the state for the indigent insane.

Dated at _____, 190 .

We, the undersigned, selectmen of _____, hereby certify that the representations in the above petition are in our belief true, and that said _____ is an indigent insane person.

N. B.—Please write whether the insane person has any property, and if so, what amount, and any other facts you may think proper in relation to the ability of the insane person's near relatives.

NOTE.—The amount received by the applicant, it will be understood, is regulated entirely by the number who may apply for aid, and the comparative need of assistance.

ORDER FOR SUPPORT OF TOWN AND COUNTY PATIENTS.

We, _____, hereby order the committal of _____ to the New Hampshire State Hospital at Concord, there to be supported at the expense of _____, in accordance with the statute, during _____ residence at said hospital.

_____ 190 .

NOTE.—To be signed by mayor, selectmen, or overseer of poor, in case of town charge; by county commissioner, in case of county charge.

N. B. Admission will be refused unless the requirements of the law are strictly complied with. See extract from the laws at the foot of this blank.

FORM OF CERTIFICATE OF INSANITY.

REQUIRED FOR ADMISSION OF PATIENTS.

After due inquiry and personal examination of _____, of _____, made within one week prior to date, we certify that _____ is insane, and fit subject for treatment at the New Hampshire State Hospital.

_____, M. D.
_____, M. D.

_____, 190 .

Having personal acquaintance with the signers of the above certificate, I certify that the signatures are genuine, and the signers reputable physicians.

_____, 190 .

EXTRACT FROM THE LAWS OF NEW HAMPSHIRE.

SECTION 18. No person shall be committed to the New Hampshire State Hospital, except by the order of the court or the judge of probate, without the certificate of two reputable physicians that such person is insane, given after a personal examination made within one week of the committal; and such certificate shall be accompanied by a certificate from the judge of the supreme court, or court of probate, or mayor, or chairman of the selectmen, testifying to the signatures, and the respectability of the signers.

LAWS

RELATING TO THE NEW HAMPSHIRE STATE HOSPITAL.

THE NEW HAMPSHIRE STATE HOSPITAL.

SECTION

1. Corporate name.
2. Trustees, how appointed.
3. Tenure of office of trustees.
4. Trustees to manage affairs of hospital.
5. To appoint officers, etc.
6. Trustees not to receive compensation.
7. To make regulations.
8. May hold property in trust.
9. Shall make report annually.
10. Board of visitors and their duties.
11. State Hospital land taken for highways only by authority of legislature.
12. Property of hospital exempt from taxation.
13. Annual appropriation to library.

COMMITMENT TO STATE HOSPITAL.

14. Parent, guardian, etc., may commit.
15. Insane paupers how committed by town.
16. County paupers, how committed.
17. Dangerous insane persons, how committed.
18. Certificate of two physicians required to commit.
19. Regulations for commitments to the hospital to govern commitments to other institutions.

SUPPORT AT STATE HOSPITAL.

20. When county shall support insane person.

SECTION

21. When means of support fail, counties to support on notice.
22. What inmates of hospital for insane supported by state.
23. County may recover expense paid.
24. Concord not liable.
25. Certain insane persons to be supported by state.
26. Annual appropriations for indigent insane.

DISCHARGE FROM STATE HOSPITAL.

27. How discharged from hospital.
28. Trustees to visit hospital and hear statements of patients.
29. Superintendent to furnish stationery to patients, and transmit their letters to trustees.

CORONER'S INQUEST IN CASE OF

SUDDEN DEATH.

30. Inquest on patient suddenly deceased.

COMMISSION OF LUNACY.

31. Insane persons wards of state.
32. Commission of lunacy.
33. Powers and duties of commission of lunacy.
34. Records and reports of commission of lunacy.
35. Superintendents to make reports to commission of lunacy.
36. Annual appropriation for expenses of commission.

SECTION 1. The hospital for the insane, at Concord, is a corporation under the name of the New Hampshire State Hospital.

SECT. 2. The government of the hospital is vested in twelve trustees appointed and commissioned by the governor, with advice of the council; and all vacancies shall be filled in the same manner.

SECT. 3. The trustees are classified and commissioned in such manner that the offices of three trustees become vacant annually.

SECT. 4. The trustees shall take charge of the property and concerns of the hospital; shall see that its affairs are conducted properly; may enter into and bind the hospital by such contracts relative to the support of patients and the affairs of the hospital as they may deem advantageous; and may receive, appropriate, control, convey, or invest any property given to or owned by the hospital in such manner as they may think expedient.

SECT. 5. The trustees shall appoint a secretary, who shall keep a full and fair record of their proceedings; a treasurer, who shall give bond for the faithful discharge of his duties; and such physicians, officers, and assistants, with such salaries and allowances, as may from time to time be found necessary.

SECT. 6. No trustee shall receive any compensation for his services as trustee; but expenses necessarily incurred by him shall be paid by the hospital.

SECT. 7. The trustees may make such regulations for their own government, for the management of the hospital and all persons connected therewith, and for the admission and care of patients, and the same from time to time alter, as convenience may require.

SECT. 8. The hospital may take and hold in trust any grant or devise of real estate, or any donation or bequest of personal property, and may apply the same, unless otherwise restricted, to lessen the expenses of the indigent insane.

SECT. 9. The trustees shall make to the governor and council, annually, a report, covering that of the superintendent to them, of the receipts and expenditures of the hospital, the number of patients admitted and discharged during the year, and all other matters connected with the general inter-

ests of the hospital. It shall be filed in the office of the secretary of state on or before the first day of December.

SECT. 10. The governor and council, president of the senate and speaker of the house, shall constitute a board of visitors of the hospital; shall visit and inspect the same when necessary, examine into the condition of the patients and the regulations and general management of the hospital; see that the design thereof is carried into full effect; and make to the legislature, at each biennial session, a report which shall be furnished to the secretary of state on or before the first day of the December next preceding such session.

SECT. 11. No land connected with the hospital shall be taken for a highway or other public use, except by the express authority of the legislature, for that purpose first had and obtained.

SECT. 12. The property of the hospital is exempted from taxation.

SECT. 13. The sum of one hundred dollars is annually appropriated toward the support and increase of the library of the hospital.

COMMITMENT TO HOSPITAL.

SECT. 14. The parent, guardian, or friends of any insane person may cause him to be committed to the hospital, with the consent of the trustees, and there supported on such terms as they may agree upon.

SECT. 15. Any insane pauper supported by a town may be committed to the hospital by order of the overseers of the poor, and there supported at the expense of the town.

SECT. 16. If the overseers neglect to make such order in relation to any insane county pauper, the supreme court, or any judge thereof in vacation, may order such pauper to be committed to the hospital, and there supported at the expense of the county.

SECT. 17. If any insane person is in such condition as to render it dangerous that he should be at large, the judge of probate, upon petition by any person and such notice to the selectmen of the town in which such insane person is, or to

his guardian or any other person, as he may order, may commit such insane person to the hospital; and such petition may be filed, notice issued, and hearing had in vacation or otherwise.

SECT. 18. No person shall be committed to the State Hospital, except by an order of the court or the judge of probate, without the certificate of two reputable physicians that such person is insane, given after a personal examination made within one week of the committal. Such certificate shall be accompanied by a certificate of a judge of the supreme court or court of probate, mayor, or one of the selectmen, certifying to the genuineness of the signatures and the respectability of the signers.

SECT. 19. All laws relative to the commitment of insane persons to the New Hampshire State Hospital shall govern the commitment of insane persons to all other places in this state where insane persons are confined; but no insane person, other than a pauper, shall be admitted to any county asylum.

SUPPORT AT STATE HOSPITAL.

SECT. 20. Any insane person committed to the hospital by his parent, guardian, or friends, who has no means of support and no relatives of sufficient ability chargeable therewith, and no settlement in any town in this state, and who is in such condition that his discharge therefrom would be improper or unsafe, shall be supported by the county from which he was committed.

SECT. 21. When the means of support of any inmate of the hospital shall fail or be withdrawn, the superintendent shall immediately cause notice in writing of the fact to be given to one of the county commissioners of the county from which such inmate was committed; and such county shall pay to the hospital the expense of the support of such inmate from and after the service of such notice, and for ninety days next prior thereto.

SECT. 22. Any insane person charged with an offense, the punishment whereof is death or confinement in the state prison, committed to the hospital by order of the supreme

court, shall be supported at the expense of the state during his confinement there. Any other insane person committed to the hospital by the supreme court or a judge thereof, and any insane person committed by a judge of probate, shall be supported by the county from which he was committed.

SECT. 23. The county or town paying the expense of the support of an inmate of the hospital shall be entitled to recover the amount so paid of the inmate himself, if of sufficient ability to pay; otherwise of the town, county, or person by law liable for his support.

SECT. 24. The city of Concord shall not be liable for the support of any insane person committed to the hospital unless he was committed from said city.

SECT. 25. Any insane person who has been an inmate of the State Hospital for twenty years, and been supported in whole or in part during that time by others than the town or county chargeable therewith, and who has no means of support and no relations chargeable therewith, and who cannot properly be discharged from the hospital, shall be supported there at the expense of the state.

SECT. 26. The sum of six thousand dollars (\$6,000) is annually appropriated for the support at the State Hospital of such indigent insane persons belonging to the state as the governor, from time to time, may designate; but two thirds at least of the sum shall be applied to the support of private patients who are not maintained at public charge.

DISCHARGE FROM STATE HOSPITAL.

SECT. 27. Any person committed to the State Hospital may be discharged by any three of the trustees, by the commission of lunacy, or by a justice of the supreme court, whenever a further retention at the hospital is, in their opinion, unnecessary; but any person so discharged who was under sentence of imprisonment at the time of his commitment, the period of which shall not have expired, shall be remanded to prison.

SECT. 28. Some one of the trustees, without previous notice, shall visit the hospital at least twice every month, and

give suitable opportunity to every inmate therein to make to him, in private, any statements such patient may wish to make; and, whenever he deems it proper, he shall call to his aid two other trustees, who shall, with him, make a further examination of such inmate and of the statements by him made. If, in their judgment, a further detention is unnecessary, it shall be their duty to discharge such inmate. They may order such immediate change in the treatment of any inmate as they deem judicious; and, in case of failure to secure it, they shall at once summon a meeting of the whole board, whose duty it shall be to take such measures as the exigency of the case demands.

SECT. 29. The superintendent shall furnish stationery to any inmate who desires it; and shall transmit promptly and without inspection, to the trustee whom the board may designate, all letters addressed to the board by inmates of the hospital.

CORONER'S INQUEST IN CASE OF SUDDEN DEATH.

SECT. 30. In event of the sudden death of any inmate, a coroner's inquest shall be held, as provided for by law in other cases.

COMMISSION OF LUNACY.

SECT. 31. All persons deprived of their liberty in this state by being committed to custody as insane persons, shall be wards of the state and subject to state supervision.

SECT. 32. The state board of health shall constitute a commission of lunacy.

SECT. 33. The commission, by one or more of their members, shall, without previous notice, visit and make thorough inspections of all asylums and other institutions for insane persons in the state, as often as once in four months. They shall examine into the care and treatment of the insane, the sanitary condition of each asylum or institution, and all other matters relating to the general welfare of the inmates. They may order the removal of any indigent insane person to the New Hampshire State Hospital for remedial treatment, and such

person while under such treatment shall be supported at the expense of the state. When the need of such treatment shall cease, the commission shall so notify the county, town, or relative liable for the support of such inmate, and if he is longer continued at the hospital it shall be at the expense of such county, town, or relative.

SECT. 34. The commission shall keep a correct record of the number of commitments, discharges, and deaths at each asylum, institution, or other place of detention, and of the age, sex, and nationality of each person committed, discharged, or deceased, and shall report the same annually to the governor and council, with any other matters or recommendations which in their judgment are important.

SECT. 35. The superintendent of every asylum or other place in this state where insane persons are confined, shall, within three days after the commitment thereto of any person, notify the commission thereof, upon blanks furnished for that purpose; and the said superintendent shall at all times furnish to the board such information regarding the insane in his charge as they may request.

SECT. 36. To meet the expenses imposed upon the commission by the foregoing sections, the sum of twelve hundred dollars (\$1,200), or so much thereof as may be required, is annually appropriated; and the expenditures shall be audited by the governor and council.

—*Public Statutes of N. H., chapter 10.*

SECT. 4. The following persons are also exempted from military duty:

.
the attendants upon the insane, employed in the State Hospital;
.
the officers and keepers of the State Hospital.

—*Public Statutes, chapter 96.*

SECTION 1. Whenever the grand jury shall omit to find an indictment against a person, for the reason of insanity or mental derangement, or a person prosecuted for an offense shall

be acquitted by the petit jury for the same reason, such jury shall certify the same to the court.

SECT. 2. Any person prosecuted for an offense may plead that he is not guilty by reason of insanity or mental derangement, and such plea may be accepted by the state's counsel, or may be found true by the verdict of the jury.

SECT. 3. In either of the cases aforesaid, the court, if they are of opinion that it will be dangerous that such person should go at large, may commit him to the prison or to the State Hospital, there to remain until he is discharged by due course of law.

SECT. 4. The governor and council or the supreme court may discharge any such person from prison, or may transfer any prisoner who is insane to the State Hospital, to be there kept at the expense of the state, whenever they are satisfied that such discharge or transfer shall be conducive to the health and comfort of the person and the welfare of the public.

SECT. 5. If any insane person is confined in jail, or a house of correction, the supreme court may order him to be committed to the hospital if they think it expedient.

—*Public Statutes, chapter 255.*

AN ACT in addition to chapter 10 of the Public Statutes, relating to insane persons.

SECTION 1. When application is made to the judge of probate, or the supreme court or any justice thereof, for the committal of any person to the State Hospital, said court or judge may appoint two reputable physicians to examine said person, with or without notice to him or her from said court or judge; said physicians shall immediately report the result to said court or judge, who may, upon such report, and such evidence as can be produced, order said person to be committed to said hospital when there is a sufficient reason for making such order.

SECT. 2. Said supreme court, or any justice thereof, shall at any time, with or without notice, upon application and due cause shown, investigate the question whether there is suffi-

cient reason for the detention in said hospital of any person who has been committed thereto, and shall order his or her discharge where said order ought to be made, with or without a writ.

[Approved February 26, 1845.]

JOINT RESOLUTION with reference to the title of the property of the New Hampshire State Hospital.

Resolved by the Senate and House of Representatives in General Court convened:

WHEREAS, The entire property of the New Hampshire State Hospital is owned by the state of New Hampshire, either absolutely or in trust, but the legal title of the land, buildings, and other property stands in the name of the trustees of the asylum appointed by the state, and

WHEREAS, It is desirable that the legal title should conform to the actual title, therefore,

Be it enacted by the Senate and House of Representatives in General Court convened:

That the attorney-general be directed to examine the deeds and other conveyances of title to said property, and advise the trustees what conveyances, if any, should be made to perfect the legal title of the state to said property, and the trustees be directed to execute such conveyances as may be advised by the attorney-general, and deliver the same to the governor and council in behalf of the state, within sixty days from the passage of this resolution.

[Approved March 24, 1897.]

AN ACT in relation to the New Hampshire State Hospital.

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. No change shall be made by the trustees of the New Hampshire State Hospital of its trust funds, except upon approval by the governor and council. In making

any investments of its trust funds, the trustees shall submit their recommendations to the governor and council before such investments are made. The governor and council may also direct in whose custody the bonds, notes, and other securities of the institution shall be kept.

SECT. 2. The auditing of the accounts of the trustees, or any agent appointed by them, shall be performed by the bank commissioners, under the direction of the governor and council, who shall have authority at any time to direct said commissioners to make an examination of the financial affairs of the institution.

SECT. 3. Before expending any money received from any source in the construction of new buildings, the trustees shall submit plans and estimates of all such buildings to the governor and council for their approval.

SECT. 4. This act shall take effect upon its passage.

[Approved March 25, 1897.]

AN ACT in amendment of section 33 of chapter 10 of the Public Statutes, relating to the commission of lunacy.

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. Section 33 of chapter 10 of the Public Statutes is hereby amended by inserting after the word "state" in the eleventh line the words "such expense not to exceed in any one year the sum of sixteen thousand dollars (\$16,000) for all such persons," so that said section, as amended, shall read: "SECT. 33. The commission, by one or more of their members, shall, without previous notice, visit and make thorough inspections of all asylums and other institutions for insane persons in the state, as often as once in four months. They shall examine into the care and treatment of the insane, the sanitary condition of each asylum or institution, and all other matters relating to the general welfare of the inmates. They may order the removal of any indigent insane person to the New Hampshire State Hospital for remedial treatment, and such person, while under such treatment, shall be

supported at the expense of the state, such expense not to exceed in any one year the sum of sixteen thousand dollars (\$16,000) for all such persons. When the need of treatment shall cease, the commission shall so notify the county, town, or relative liable for the support of such inmate, and if he is longer continued at the hospital it shall be at the expense of such county, town, or relative."

SECT. 2. This act shall take effect and be in force from and after June 1, 1897.

[Approved March 26, 1897.]

AN ACT relating to Insane Criminals.

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. When a person is indicted for any offense or is committed to jail on any criminal charge to await the action of the grand jury, any justice of the court before which he is to be tried, if a plea of insanity is made in court, or said justice is notified that such plea will be made, may, in term time or vacation, order such person into the care and custody of the superintendent of the New Hampshire State Hospital, to be detained and observed by him until further order of the court, that the truth or falsity of the plea may be ascertained.

SECT. 2. The person so committed shall be there supported at his own expense, if he has sufficient means; otherwise, at the expense of the state.

SECT. 3. All acts and parts of acts inconsistent with this act are hereby repealed, and this act shall take effect upon its passage.

[Approved February 20, 1901.]

AN ACT to change the Name of the New Hampshire Asylum for the Insane.

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. Section 1 of chapter 10 of the Public Statutes is hereby amended by striking out the words "Asylum for the

Insane," and inserting in place thereof the words "State Hospital," so that, when amended, the section will read: "The Asylum for the Insane at Concord is a corporation under the name of the New Hampshire State Hospital."

SECT. 2. Wherever the words "New Hampshire Asylum for the Insane" occur in the subsequent sections of chapter 10, and in laws passed in amendment thereof, the words "New Hampshire State Hospital" shall be substituted.

[Approved February 27, 1901.]

BY-LAWS

OF THE NEW HAMPSHIRE STATE HOSPITAL, ADOPTED BY THE
TRUSTEES AT A MEETING OF THEIR BOARD HOLDEN OCTO-
BER 31, 1878, WITH SUBSEQUENT AMENDMENTS.

SECTION 1. The annual meeting of the board of trustees shall be holden at the State Hospital in Concord, on the third Thursday of November of each year, and a semi-annual meeting shall be held on the third Thursday of May of each year.

SECT. 2. The trustees shall, at the annual meeting, elect by ballot a president, secretary, and treasurer, who shall hold their respective offices one year, and until others are chosen in their stead. At times, when either of said offices is vacant, it may be filled at a special meeting of the trustees duly called for that purpose.

SECT. 3. Notice of the annual and semi-annual meetings shall be given by the secretary to each trustee, either verbally or by mail, at least fourteen days previous to the day of meeting; and any meeting may be continued by adjournment, from time to time, until the business thereof shall be completed. In case of omission to notify the annual meeting, the same shall not be lost, but shall be considered as adjourned for the transaction of business, until the required notice thereof shall be given, which the secretary shall forthwith proceed to give.

SECT. 4. The president, or any four of the trustees, may call a special meeting of the trustees whenever in the opinion of either it may be deemed expedient so to do; and the same notice shall be given of a special as of the annual meeting, which notice shall state specifically the business to be brought before such meeting. In case of a vacancy in the office of secretary, the president shall notify the annual meeting.

SECT. 5. A majority of the members of the board shall constitute a quorum for the transaction of any business; but any less number, at a meeting duly called, may adjourn from time to time, until a quorum be obtained.

SECT. 6. Two of the trustees shall visit the hospital each month; and notices of the months by him selected, or to him assigned, shall be sent to each member by the superintendent before the first day of such month.

SECT. 7. No trustee shall receive any compensation for his services as trustee; but expenses necessarily incurred in rendering the same shall be paid by the hospital.

SECT. 8. The trustees shall, at each annual meeting, appoint from their number an auditor, whose duty it shall be to examine the books and audit the accounts of the treasurer and of the financial agent for the ensuing year, and make a written report to the board at their annual meeting.

SECT. 9. The treasurer shall give a bond, acceptable to the trustees, in the penal sum of fifteen thousand dollars (\$15,000), for the faithful performance of his duties for and during such time as he shall continue to hold the office of treasurer, which bond shall be deposited with the president of the board.

SECT. 10. The treasurer shall receive, hold, and disburse all moneys coming to the hospital, except the permanent funds and the income thereof. He shall make an exhibit of the state of his books, and of the property in his custody, when called for by the trustees. He shall make up his accounts to the thirtieth day of September, inclusive, in each year, which accounts, with his report thereon, shall be laid before the trustees at their annual meeting. His books shall at all times be open to the examination of the trustees.

SECT. 11. The treasurer shall pay all bills approved by the superintendent, and, in addition thereto, such orders as the superintendent may draw on him for the ordinary expenditures of the hospital, when said offices are held by different individuals.

SECT. 12. The treasurer shall receive such compensation for his services as the trustees may from time to time determine.

SECT. 13. The secretary shall attend all meetings of the board of trustees, and keep a record of their proceedings. He shall also prepare, or cause to be prepared, all documents,

statements, and notices which may be ordered by the board, or by the president thereof.

SECT. 14. The secretary shall receive such compensation for his services as the trustees may from time to time determine.

SECT. 15. The board of trustees shall appoint a superintendent, who shall be a physician, and reside at the hospital. He shall have the entire control of the treatment and management of the patients; the power to appoint and discharge all persons employed in their care; and shall exercise a general supervision and direction of every department of the institution.

SECT. 16. The superintendent shall make a written report to the trustees, at their annual meeting, of the condition of the hospital, and embracing such other topics as may have been suggested by the progress of the institution and the experience of the year.

SECT. 17. The superintendent shall receive for his services, in addition to furnished apartments, board, lights, and fuel for himself and family, such a salary as the trustees may from time to time determine.

SECT. 18. The superintendent shall furnish, to the acceptance of the trustees, a bond for the faithful performance of his duties, in the penal sum of ten thousand dollars (\$10,000), which bond shall be kept by the president of the hospital.

SECT. 19. The superintendent shall appoint two assistant physicians, who shall reside at the hospital. They shall possess such characters and qualifications as will enable them to discharge the ordinary duties of the superintendent, and shall at all times perform such duties as he may assign them, and to his acceptance.

SECT. 20. The assistant physicians shall receive such compensation for their services as the trustees may from time to time determine, in addition to furnished apartments, lights, fuel, and board.

SECT. 21. All funds amounting to one hundred dollars (\$100) and upwards, which have heretofore been or which may hereafter be given to the New Hampshire State Hospital shall,

unless otherwise ordered by the donors, be entered upon the books of the financial agent as permanent funds, with the surnames of the donors attached to each, and be forever kept intact. The income of each shall be expended from time to time in accordance with the conditions upon which it was given, or, in the absence of conditions, in such manner as the trustees shall deem to be for the highest interest of the hospital and its patients.

SECT. 22. There shall be chosen, by ballot, a financial agent, who shall have charge of the permanent funds of the hospital, shall collect, and, under the advice of the finance committee, from time to time invest, manage, and disburse any moneys arising therefrom. He shall be, *ex officio*, a member of the finance committee, shall give a satisfactory bond for the faithful performance of his trust, in the sum of twenty-five thousand dollars (\$25,000), and continue in office until his successor is elected. He shall receive for his services such compensation as the trustees shall from time to time determine, and make up his accounts to the thirtieth day of September, inclusive, of each year.

SECT. 23. The trustees shall annually choose two from their board, who, with the financial agent, shall constitute a finance committee, and have general supervision and control of the permanent funds of the hospital, with power to sell and transfer any stocks, bonds, and other securities belonging to said funds, whenever, in their judgment, it may be expedient so to do.

SECT. 24. Besides attending the annual meeting, the trustees shall severally visit the hospital twice each year, in such months as they may select, or as may be assigned to them; make a thorough examination of the house and of the condition of the patients; and, before leaving, make a record of their respective visits in a book kept at the hospital for that purpose.

SECT. 25. These by-laws may be altered or amended at any annual meeting by a vote of two thirds of the trustees present, or at a special meeting called for that purpose.

NEW HAMPSHIRE STATE HOSPITAL TRAIN- ING SCHOOL FOR NURSES.

MILLIE C. GODFREY, *Superintendent of Nurses.*

C. P. BANCROFT, M. D.

F. L. HILLS, M. D.

C. S. WALKER, M. D.

JULIA WALLACE RUSSELL, M. D.

CHARLES R. WALKER, M. D.

RACHEL RAND, *Instructor in Cooking.*

ARTHUR SUMNER, M. D.

The trustees of the New Hampshire State Hospital, having established a training school for nurses at that institution, offer to give women desirous of becoming professional nurses, a two years' course of training in general nursing, with especial reference to the care of cases of nervous and mental disease.

Those wishing to receive such instruction must apply to Dr. C. P. Bancroft, superintendent of New Hampshire State Hospital, Concord, N. H.

The most desirable age for candidates is from twenty to thirty-five years. They must be in sound health, and sufficiently interested in the subject of nursing, and free from all incumbrances, so that they can, in all reasonable probability, complete the prescribed course of two years.

The superintendent of nurses has the immediate charge of the training school, under the authority of the superintendent of the hospital, and the nurses are subject to the rules of the hospital. The right is reserved to terminate the connection of any nurse or pupil with the school for any reason which may be deemed sufficient.

All nurses are required to be intelligent, trustworthy, kind, and cheerful.

The instruction includes the general care of the sick, the making of beds, changing bed and body linen, managing of helpless patients in bed, etc., giving baths, keeping patients warm or cool, prevention and dressing of bed sores, and the proper management of patients under various conditions of disease; the making and applying of bandages; the dispensing of drugs; the management of patients in accidents and emergencies; the application of poultices, the dressing of burns, ulcers, and wounds; the administering of enemas, and the use of the female catheter.

A course in cooking for the sick will be given by a competent instructor from the Boston Cooking School. Instruction will be given by the superintendent of nurses, by the medical staff at the hospital, and by physicians and surgeons resident in the city.

Students in the training school act as nurses in the various wards of the hospital during their term of service. During the first year they receive from \$3 to \$3.50 per week; during the second year, from \$3.50 to \$4 per week.

When the full term of two years is completed, the nurses receive, if they pass all the examinations and their service in the hospital has been satisfactory, a diploma, certifying to the completion of the regular training and practice. Nurses who have served the full course in this hospital have found ready engagement as head nurses in the hospital, with wages of \$20 to \$25 per month, or as private nurses outside, at from \$10 to \$15 per week.

Nurses are required to wear at all times while on duty in the wards, the training school uniform.

The school begins in the fall, but accepted candidates may enter at any time, as vacancies occur. They are, as a rule, received in the order of their application.

QUESTIONS TO BE ANSWERED BY CANDIDATES.

1. Name in full of candidate.
2. Are you married, single, or widow?
3. Your present occupation or employment.
4. Age at last birthday, date and place of birth.
5. Are you strong and healthy?
6. Height? Weight?
7. Are you free from domestic or other responsibility, so that you are not liable to be called away?
8. Name of any responsible person for reference.
9. Have you ever served in any other asylum or hospital, and if so, when and where?

Having read, and clearly understanding and agreeing to, the foregoing conditions and regulations, I declare the above statement to be correct.

(Signed)

Present address,

Date, 190 .

GRADUATES OF THE SCHOOL.

CLASS OF 1890.

Ellen H. Colton.	Addie J. Eastman.
Millie C. Godfrey.	Y. Farouhain.
Mary E. Londergan.	Mabel Bacon.
Winifred C. Dillon.	Helen F. Baker.
Sarah A. Taylor.	Annie E. Harris.
	Nellie Radman.

CLASS OF 1891.

Katherine Jones.	Gertrude Dillon.
Mary L. Wood.	Lilla M. Felch.
Clara L. Coombs.	Mabel Darling.
	Laura J. Hazlitt.

CLASS OF 1892.

Adelaide G. Waters.	Jessie B. Lang.
Ettie E. Cook.	Elizabeth Ackland.
	Nettie Kinread.

CLASS OF 1893.

Jennie N. Peach.	Vivia M. Lohnas.
Winnie Sleeper.	Mrs. Alma D. Hale.
Flora P. Scruton.	Agnes Marie Levinsohn.

CLASS OF 1894.

Harriet Frances Walleston.	Annie Marion Donaven.
Lillian Alberta Cameron.	Elizabeth Helena Elliott.
Elizabeth Augusta Slipp.	Florence Gertrude Hall.
Nettie Rayworth.	Edgar Alonzo Howe.

CLASS OF 1895.

Gertrude E. Cameron.	Nellie Chapman.
	Abbie Larabee.

CLASS OF 1896.

Lulu Barbrick.	Clara E. Pinney.
Flora E. Brawn.	Lila M. Colburn.
Elizabeth S. Thompson.	Helen E. McLane.
Hattie E. Bragdon.	Kathleen Kersey.
Jennie Quinn.	Jennie L. Johnstone.

CLASS OF 1897.

Carolyn Bryant.	Anna B. Innis.
Kate Rauch.	Ida C. Noble.
Erena Yale.	Margaret Alexander.
Mary F. Maher.	Florence R. Tobin.
Frances Cummings.	Fred L. Howe.

CLASS OF 1898.

Sarah S. Bugbee.	Lilla B. Brown.
Elsie M. Seierup.	Elizabeth H. Ham.
Carol L. Conant.	Martha E. Jackman.
Bessie Nesbitt.	Minnie F. Praught.
Emma M. Stearns.	Annie F. McDonald.
Myra Haynes.	Hattie Lee Evans.
John L. Welsh.	

CLASS OF 1899.

Harriet Mabel Cruise.	Eliza Roberts.
Emma Marie Griep.	Margaret H. Schurman.
Mabel Goodwin Harvey.	Belinda H. Tappan.

CLASS OF 1900.

Anna L. Butterfield.	Matilda E. Howard.
Rosie Cockell.	Ida M. Hunt.
Ethelyn Dutcher.	Harriet J. Little.
Mary E. Fish.	Lorena E. Rogers.
Eunice A. Fisk.	Alice A. Tweedie.
Anna B. Tweedie.	

CLASS OF 1901.

Jennie May Cockell.	Elizabeth Thresa Murphy.
Ada Avery Evans.	Anna Reed Wilson.
Annie Greenfield Wood.	

CLASS OF 1902.

Amelia Jane Bullock.	Jennie Ellen Mather.
Anna Day.	Melissa Helen Pressey.
Veloura Belle Johnson.	Addie Anna Taylor.
Annie Langille.	Tena Anna Urquhart.
Hilda Olivia Lawson.	Ada Jane VanVranken.

COURSE OF INSTRUCTION FOR MALE ATTENDANTS AT THE NEW HAMPSHIRE STATE HOSPITAL.

1. Care of the ward and ward appliances.
2. Emergencies and accidents.
3. Insanity, its symptoms and forms, and rules for the management of the same.
4. The same concluded.
5. Suicide.
6. Poultices, rubifacients, and counter-irritants.
7. Bandages and slings, uses, etc.
8. Medicines,—administration, etc.
9. Regional anatomy, demonstration of important blood vessels and bones on the subject.
10. Practical demonstration in bed-making, changing sheets, making up sick-bed, etc.

AN ADDRESS GIVEN AT THE GRADUATION OF THE
CLASS OF 1901 AT THE NEW HAMPSHIRE STATE
HOSPITAL, JUNE 12, 1901.

ARTHUR SUMNER, M. D., CONCORD, N. H.

"I rise, Mr. Chairman, as both of us know
With the impromptu I promised you three weeks ago,
Dragged up to my doom by your might and my mane,
To do what I vowed I'd do never again;
And I feel like your good honest dough when possessed
By a stirring, impertinent devil of yeast.
'You must rise,' says the leaven. 'I can't,' says the dough;
'Just examine my bumps and you'll see it's no go.'
'But you must,' the tormentor insists; 'tis all right,
You must rise when I bid you, and, what's more, be light.'
'Tis a dreadful oppression, this making men speak
What they're sure to be sorry for all the next week;
Some poor stick requesting, like Aaron's, to bud
Into eloquence, pathos, or wit in cold blood."

This introduction, used many years ago by the poet Lowell, voices my first feelings when asked to speak to you upon this occasion. I felt as if I could give you but little worthy of your attention and thought. Now that time has brought us up to this celebration, I feel highly honored in having been asked to address you, and it gives me great pleasure, as well, to assist in celebrating such an important festival in your career as your graduation from the training school of the New Hampshire State Hospital. You will often recall with satisfaction the excellent instruction and splendid opportunities you have had here.

The celebration this evening marks the closing of a period of preparation for life's work. The past two years have been filled with the stern determination and struggle to acquire a

new art. There have been times when failure has buried its fangs deep into your feelings and left there the poison of discouragement. There have been other times when the joy and exhilaration of mastering some knotty problem in your work have given you courage to continue to the end. These latter are milestones along the way. The race has been run, and now you are entitled to the plaudits of the host of friends that have cheered you on and I want to be with the foremost to present my congratulations for your present victory and extend my best wishes for a successful and useful life.

In view of this completion of your task it comes to me that the evening should be given over wholly to joyousness and congratulation, for it seems out of place to take precious time with any tedious address. But the thought comes into mind that graduation is not merely a flourish, closing one chapter, but an illuminated capital commencing a new and unread section in the book of life.

Between the present and the setting sun of our life lies thick and dark the future. Dim shadows falling at our feet bid us pause for a moment in our pleasure and consider at what altar fire we shall light our torch with which to scatter the shades and illumine our way.

"Dear is the past; its treasures we hold in our hearts for aye.

Woe to the hand that would scatter one wreath of its garnered flowers;

But larger blessings and honor will come with the waking day—

Hail, then, to-morrow, nor tarry with yesterday's ghostly hours!"

It would be superfluous for me to say at this time that as you have now entered upon a noble work you should determine to give it your strength and mind and heart; not to rest in your endeavors until you shall have attained the highest point of perfection possible. Some ideal of growth and high attainment in your work you now have in mind, for such desire is a part of the ambition to succeed that rightfully belongs to every beginner.

It is in later years, after one has been tossed by the storms of experience and finds his craft, which he thought so trim at the beginning of the voyage, now sailing heavily and far from port. The light at the bow is burning feebly, the compass is not always pointing truly, and the voyage is becoming tiresome. This is the time of life that one looks back at the time he started and questions whether after all his craft has been well fitted and whether he began his voyage with the true idea of success. The chief thing is not whether we have a chart by which we shall shape our conduct and development, but whether the course is so laid that it will carry us into broader seas and bring us to fairer shores.

There are two conceptions of life: one is the attainment of perfection by the survival of the fittest and the destruction of the weak; the other is perfection reached through the strong bearing the burdens of the weak, the wise helping the foolish, and the healthy assisting the sick.

The progress made by the survival of the fittest, in which the strong rise upon the trodden shapes of the weak, has been the progress made in the evolution of animal life. It is now the principle by which the lower elements of our nature rise into prominence and control. This cannot be our guiding principle in dealing with men, for we have a calling in which the fittest is not always the strongest, and our success does not depend upon the destruction of the weak. New prophets have arisen in these latter days. Their message to the world is that evolution must yield its monopoly of the self-preservation idea to make room for the law of altruism, or regard for others. The principle that perfection is reached through the strong bearing the burdens of the weak, the wise helping the foolish, and the healthy helping the sick, is one you can safely take as a working principle, for it permits of the exercise of the noblest and highest faculties which were given for such use. The former is animal; the latter, human.

It is not merely bringing to the service of others one's self that is important, but to bring to such service only the very best of one's self. President Harris of Amherst has written a book

entitled "Moral Evolution," in which he argues for "a self-realization" as necessary if we are to be of help to others. He says: "Thou shalt love thy neighbor as thyself" is the second of two great commandments on which hang all the moral precepts of lawgivers and prophets. The comparison has respect not to quantity but to quality. It does not mean that one is to love his neighbor as much as he loves himself, that he is to give just as much time, thought, care, service, to his neighbor as he gives to himself, in an equal division as possible. It means that one is to love his neighbor in the same way that he loves himself, in the same manner, after the same fashion, with the same objects in view, like as he loves himself." In other words, in order to know how to serve our neighbor we must first know how to love the best in ourselves.

It appears from first thought that the calling you have chosen, in itself, could not fail to lead up to the discovery and the development of the best in one's self. For it seems self-evident that bringing to the sick and disconsolate a trained mind and skilled hand is one of the arts that polish life. We have heard much about the respectability of labor. There is a philosophy that teaches not only the respectability but the necessity of a vocation for our fullest development. There has been bruited abroad so strenuously the idea that a trade should be a part of every one's training for life that men and women now enter into the field of work, many thinking that in labor can be found not only the source of livelihood but that in a vocation may be found all that is necessary for the fulfillment of life.

A high idea of realizing life can thus degenerate to the idea of performing faithfully the forms of a calling.

Whereas on the one hand it is true that a vocation is necessary for the development of ourselves, on the other hand, unless conceived from the right standpoint, labor is killing to the finer instincts of our nature. A slave labors. He may perform his duties perfectly, but he is lost to the highest in life. So with the high calling which you have chosen it is also true that it can be made by you the means of satisfying the

higher growth and cause you to fall far short of your ideal of perfection as a nurse.

I once knew a man who was a large manufacturer of shoes. His aim in life was to be honest in his dealings, faithful in business, serving his trade with the strictest integrity. Seven days a week and year after year the struggle for a model shoe claimed his thought. He succeeded and was known as a man who knew a shoe in every fiber and stitch. He was also known among his friends as knowing nothing else in life but a shoe. Everything else had been absorbed by the shoe idea. He had met the form of his vocation and produced a kind of perfection. He had not realized the higher self. I have been told of a man having an ambition to build a perfect stone wall. For years he gave his desire full scope. He had plenty of stones upon his farm and he built and rebuilt. Finally he surrounded his farm with perfectly constructed stone walls that were the envy of his neighbors. It is said of this man that when one engaged him in conversation it was impossible to talk upon any other subjects but stone walls. He also had accomplished a kind of perfection by complying fully with the outward demands of his work. But his walls were too costly. He was no more than his labor.

I have known physicians who have taken the external features of their vocation as all that there was in life. They gave their time and mind to the making of calls, extending professional sympathy to the sick, and dealing out medicine to the best of their ability. I have seen these men reach a degree of perfection in doing these things and at the same time have noticed how little after all they have read human life and been moved to its betterment.

You can draw illustrations to the same end from every line of work. The principle remains the same in all, that a vocation in itself is but an empty form. It is the lump of potter's clay.

I have frequently thought of this when professional work has brought me in contact with some nurses. When the doctor comes into the sick-room she rises and remains standing

until asked to sit down. She presents the record she has made and silently takes note of new directions. Her replies are "Yes; doctor," and "No; doctor" in most respectful tones. No servant could be more attentive to his wants and solicitous for his comfort. After the physician has gone I presume she goes about the duties of her vocation and executes her new orders.

Her training during the preparatory years have been along the lines of obedience, faithfulness, cleanliness, kindness, tact, and self-sacrifice. These are the qualities that the vocation of nursing demand of a nurse. There is but little use for the spirit of investigation, experimentation, and the institution of new methods as far as she is connected with the art of medicine. Hers not to question why, but to obey.

If you, at the beginning of your career, are filled with the desire of perfecting yourself in your work you may become most obedient, most faithful, and most self-sacrificing by drawing the nourishment for your ambition in the performance of the strict letter of your work. But this is not true perfection, for existence upon the dead level of toil so cramps the vision of the soul that one fails to ascend the mount and view the promised land in which there is life and growth and perfection.

"No life worth naming ever comes to good
If always nourished on the self-same food;
No reasoning natures find it safe to feed
For their sole diet on a single creed;
When the first larvæ on the elm are seen,
The crawling wretches, like the leaves, are green;
Ere chill October shakes the latest down,
They, like the foliage, change their tint to brown;
So by long living on a single lie,
Nay, on one truth, will creatures get its dye."

- There is inherent in the true view of labor the idea of better and still better effort and accomplishment. Thus a trade may be made the means of the highest development of the individual. A vocation should be considered as an intangible form. Having allied ourselves with it, we should fill it full of ourselves, to quicken it and give it life. It is the lump of potter's clay that we are to mold and remold until a figure has been formed full of grace and beauty by our own efforts. It is an opportunity through which we can go far towards reaching the ideal of self-realization when we put the heart and soul into it.

You may not have the privilege of becoming leaders in medicine, although associated intimately with the art of healing. Nevertheless your calling is higher and nobler than this. You are called by your work to not only possess a skill in treating the bodily sicknesses but to exhibit knowledge of the higher spiritual forces.

Here is a realm you may investigate, learn, grow, and become master of a power for good. It will make your work one surpassing in usefulness and nobility of purpose all other professions. You are called to the cultivation of character and high living that others may have character and live better lives because of your association with them.

Yours is a responsibility in life that requires the realization of the best in your nature to meet it fully.

I do not wish to be too visionary and thereby lose a footing upon the practical side of life, but I know that without the vision of the highest and the dream of the noblest things in life we would miss the inspiration and the motives for living. It is the letter that killeth but the spirit quickeneth and maketh alive.

We get out of our work just the quality we put into it. If we fill our vocation with the best of our life it returns to us inspiration of the same sort. Although the practical side of life may seem laborious and grossly material it is far more than this. There lies at the heart of all things the unseen spiritual life that makes all things vital. Bishop Lawrence says: "Has

it ever occurred to you that, if one enters his work with intensity of purpose and looks through his work into the broader interests of life, he always comes into contact with the motives, ambitions, affections, and ideals of men? He reaches through the material to the spiritual. It must be so. Behind the development of material resources and of intellectual truth stands man. It is his will, his moral and spiritual nature, that set the wheels of civilization in motion."

"We see but half the causes of our deeds,
Seeking them wholly in the outer life,
And heedless of the encircling spirit-world,
Which, though unseen, is felt and sows in us
All germs of pure and world-wide purposes."

The picture of life I have in mind for you is one in which you enter upon life's work with the high ideal of filling your soul to the full of the highest and noblest in life, that you may pour yourself into the calling and in this way realize the end of all living, the finding and using of your higher self.

Illustrations of the success of this plan of life you can find in every kind of labor. Those men and women who are our examples because of their fine characters have worked not only as others toil, but they have obeyed the heavenly vision which has constantly urged them onward toward the attainment of success in their life's work.

I am reminded here of a significant incident in the life of Him who put His sublime character into His work of healing the body and soul of man. The Master, no doubt weary from well doing, had arrived at the hospitable home of two sisters in Bethany. The daily work of the house was in progress but the arrival of the guest was the occasion in which each felt pleased to do her best to give Him proper welcome and entertainment. Mary left her work and sought a favorable position for listening at His feet. Here she was eagerly drinking in the words that were quickening her mental vision and giving her glimpses of what a human soul could be. It was a recovery of courage to her. She was renewing her strength of purpose to live higher and work better.

Martha, the sister, continued with her work, more painstaking than ever. She was a toiler. Her idea was to find satisfaction in life by performing the duties of her work as perfectly as possible. She had no patience with one who had rather talk than work, so she came to the Master and said: "Lord, dost Thou not care that my sister hath left me to serve alone? Bid her therefore that she help me." And he answered and said unto her, "Martha, Martha, thou art careful and troubled about many things: but one thing is needful: and Mary hath chosen that good part which shall not be taken away from her."

I wish to think that Mary did not shrink from the toil of work, but rather that she desired to take every opportunity to fill her heart and mind with the noble things of life and that all her deeds thereby bore the marks of a high and beautiful character.

"There is no wind but soweth seeds
Of a more true and open life,
Which burst, unlooked for, into high-souled deeds,
With wayside beauty rife.

"We find within these souls of ours
Some wild germs of a higher birth,
Which in the poet's tropic heart bear flowers
Whose fragrance fills the earth.

"Within the hearts of all men lie
These promises of wider bliss,
Which blossom into hopes that cannot die,
In sunny hours like this."

Nurses, the exalted vocation you have now entered calls you to action. It calls upon you to give your obedience, your faithfulness, your cleanliness, your kindness, your tact, and your self-sacrifice in greatest measure. At the same time it forces upon you the eternal truth that in order to reach true greatness and perfection in your work you must fill it with the best your soul can give. It calls upon you today to be humble in the form of serving but masterful in inspiring those you serve with the vision of the beauty of realizing the best in life.

Yours is

“ . . . the mission of genius on earth. To uplift,
Purify, and confirm by its own gracious gift,
The world, in spite of the world's dull endeavor
To degrade, and drag down, and oppose it forever.
The mission of genius: to watch and to wait,
To renew, to redeem, and to regenerate.
The mission of woman on earth, to give birth
To the mercy of heaven descending on earth.
The mission of woman; permitted to bruise
The head of the serpent, and sweetly infuse,
Through the sorrow and sin of earth's register'd curse,
The blessing which mitigates all; born to nurse,
And to soothe and to solace, to help and to heal
The sick world that leans on her. This was Lucille.”

GRADUATING ADDRESS TO CLASS OF 1902.

J. MILNOR COIT, PH. D., ST. PAUL'S SCHOOL, CONCORD, N. H.

Dr. Bancroft, Nurses of the Graduating Class of the New Hampshire State Hospital, Ladies and Gentlemen:

There is a reason for everything in this world, and there is a reason why I accepted Dr. Bancroft's kind invitation to address this graduating class of nurses, and why I find myself in this agreeable company this evening. The reason is because I am in very warm sympathy with you in your chosen calling, and because I have the highest regard and respect for trained nursing and the trained nurse. Society owes the trained nurse a debt which it can never pay. Let me tonight, in the name of society, then, make a payment on account, and express my own gratitude and that of others to her.

If you will pardon me for being personal, I want to tell you why I have so warm a regard for the trained nurse, and why I take so deep an interest in her work. For the past twenty-four years I have spent much of my time in the sick-room, looking after the care of those to whom I have stood in *loco parentis* who have been absent from home and family, and for whose care I have been responsible both to parents and to doctor. I have been a daily witness of the work and skill of trained nursing, and I can speak from rather a wide experience. I want to bear my testimony to the skill, fidelity, and helpfulness of nearly all the nurses with whom I have come in contact in this way. There are very few whom I would not employ again, and to whom I would not trust the care of a case for which I was directly responsible.

I am going to talk to you this evening, not from the professional standpoint at all, nor am I going to give you the history

of trained nursing; but I am going to speak from the standpoint of the patient and the friends of the patient, who will depend so much upon you and your skill. That you have been carefully trained in the technique of your profession I well know from the knowledge I have had of the work of the graduate nurses of this New Hampshire State Hospital. The diploma which you are to receive tonight is an evidence that you are proficient and able to start out into this wide field of work and to do your part with credit; otherwise you would not receive it, and it would be worth nothing to you if it did not represent this, and so you prize it, and you should prize it. I shall speak quite informally and briefly, and mention in order what I consider to be some of the essentials of a high standard in your profession, leaving out of the question that thorough and careful education for the work which you have received here.

First, then, let me speak of tact,—adaptability,—almost a grace, and the prerequisite for the best success in any walk in life where one is to be thrown much with others,—the power to adapt one's self to the surroundings and to the people with whom one is associated. A tactful person will be conservative. She must know how to say the right and kindly word, and to do the right thing at the right time. It is a rare gift, especially in a nurse, and an earnest of success. I put this quality first because I consider it so important. I have seen and known nurses who had received splendid training, who had excellent ability, were conscientious and trustworthy, but who failed to attain a high standard because they were devoid of tact; they did not know how to adapt themselves to the surroundings in which they were placed. They would, perhaps, succeed with one class of patients, but fail with others.

Let me particularize. Every household to which you will go will be different. To some, the coming of a nurse for whom room and food have to be provided is of no consequence; to others it is a serious matter. Of course you will never willingly add trouble to a household already upset by illness. On arrival you may have to listen to a long story of the illness, and what the patient feels, does, and says. Listen patiently and

give them that helpfulness which is acquired by experience. Show every anxiety to be helpful. You may be told of the household arrangements made for you. Accept them with good grace, and cheerfully, however dreadful they may seem. This is not the time to get them altered. You can easily do that when you have proven your usefulness. It is worth taking real trouble to dispel the too general impression that the first thought of a trained nurse will be her own personal comfort and her personal appearance. Do not forget that many a household and many a life is dreadfully disturbed by illness, and that many a mistress is bullied by old servants and that very likely the old servant resents your being sent for. Then go to your patient. Quite likely he may be annoyed at a nurse having been called in at all. If this be so and he shows resentment, take it gently. Remind him pleasantly that it is not your fault that you have been sent for, that you are only anxious to do your best. It is very necessary sometimes in private nursing to work as cheaply as possible. Illness is very often a sore trial to the pockets of your patient's family. A nurse who is conscientious will study the circumstances and do her utmost to save, and I can assure you that such care will be appreciated. Study this virtue of tact, and of adaptability. You will find that it will be one of the strongest elements of success if you can succeed in putting it into practice.

Then, next, is the virtue of sympathy, which is especially the characteristic of true womanhood,—a feeling for others when in distress, which prompts the loving service and the kindly word. How helpful is the sympathy which finds expression in the anticipation of the wishes of another! How all of us miss sympathy from those with whom we are thrown if we do not have it, and how we long for it in sad and lonely hours, when we long

“... for the touch of a vanish'd hand,
And the sound of a voice that is still.”

Give, then, out of the rich storehouse of your woman's heart, to the suffering and distressed in either mind or body, this

special gift, unsparingly, unstintingly. It will help your patient, and it will help you and prompt your very best efforts. You do not know the good you may be doing to some lonely and distressed sufferer. True sympathy is the incentive to many a kind act and to many a noble deed.

Then there is unselfishness to be shown, this divine attribute of our nature, the highest of all virtues, the foundation of fine and noble character. Practice this, I beg of you, in your daily work. Put self out of the question in the performance of your duty. Think only of duty and the interests of those who are under your care. Do not think that you cannot do any task you may be asked to do because it is not your work, and do not let a too keen sense of justice and of your own rights stand in the way of doing what your better nature suggests you ought to do. In the practice of your profession in private families and outside of the institution you will miss the help of schedules of hours and routine, and so you will have plenty of opportunity to do acts of kindness to which you have not been assigned.

Avoid being oversensitive. Be sensitive enough to appreciate and regard the feelings of others and prompt self-respect, but don't be "touchy."

Another virtue which will distinguish the best kind of a nurse is unfailing good temper. This, again, is where I have seen really good nurses fail. They were not good-tempered. They were upset by little things. The display of good temper belongs to the very nature of the individual herself. Its manifestation is the pleasant smile, the cheerful manner, the kind word, and, above all, putting up with disagreeable things which lie in the path of duty. The display of a good disposition is one of the chief factors in making a successful career, and it makes life so much more pleasant for ourselves and for those around us. Nothing will prejudice people against you so much as the display of bad temper. In no calling in life is there such a demand for patience and good temper as in yours. Your environment will be trying at times to the very last degree, so you will have to cultivate this if you succeed in the

best sense, and make those who employ you wish to employ you again, should occasion arise. We do not know the extent of the influence which one personality bears upon another. We are all more or less susceptible to the influence of those about us, and a sick person certainly is so in a marked degree. You will do a great deal to help along a trying case and to uphold the hands of the doctor if you will always exhibit this attractive trait of character.

Of course you have been told by those under whose instruction you have been of the duty of reticence, which is a mark of good breeding and good training,—that reserve which keeps one from repeating to others what should never be repeated by those in charge of the sick, *i. e.*, the confidences of the sick-room. What goes on there, what the patient may have said in the delirium of fever or under the stress of pain, or any other details, is for the ears of the doctor only, and of those who stand nearest the patient, and even in repeating to them such events and occurrences great caution should be used. Your loyalty to the physician under whose orders you are working will forbid his success or failure being discussed with the patient's family or friends outside. Your criticism may be the very worst thing for the patient himself, as well as a gross injustice to the practitioner. When confidence in the doctor is once shaken the best chances for the patient's recovery are weakened. Set, then, a watch before your mouth, and keep the door of your lips. No one likes a gossip or a tale-bearer. Remember that different physicians have different methods of treatment to produce the same results. Do not discuss either within or without the house where you may be working the methods, excellencies, or faults of your doctor.

You will find that a sense of humor will be a great help to you in your work. I advise you to cultivate it for your own sake as well as those in your care. It will relieve the tedium of your life and often help to brighten the sick-room, relieving the depressing effect of environment. In my own experience I have found a sense of humor the greatest help in many a trying situation. How closely in our lives are these two

sisters, Pathos and Humor, connected, and how near they are to each other at times, and how quick the transition from the pathetic side of a situation to the humorous side! I am sure you will feel this often in your experience. This sense can be cultivated by good reading, and I cannot give you better advice than to recommend to you to use much of your leisure time in reading good, wholesome books. Keep your mind well stored with useful knowledge. Know something of the great events transpiring in science, art, and literature. The more cultivated you are, the more resources you will have within yourself, and the less narrow will be your life, and the more agreeable companion you will be for your patient, with whom you may have to spend many hours. It will make you a better nurse and a more useful woman.

You have found it very necessary in your experience to practice self-control. This is absolutely essential if you are to be successful. The display of emotion in the presence of a patient may react upon him and produce a poor result. It has been my experience that, often and often, a very sick patient observes more of what is going on around him and hears more than is supposed. Even when thought unconscious they may be cognizant of what is going on, but too ill to give any sign of conscious observance. Be very careful to control your feelings and emotions in the presence of a very ill patient. As I said before, we do not know very much of the influence of one mind over another, but we do know that we must be very careful to see that our influence be helpful and uplifting, never depressing. A calm, quiet demeanor in the sick-room will inspire confidence in the patient as well as in his friends. Rather earn the reputation of being cold and unsympathetic than of being emotional in the time of anxiety and excitement. Do not let your patient see that you are anxious, and never discuss his symptoms in his presence or hearing. If he asks you about his condition, be as hopeful as you can in your answer and in your manner. You can exhibit this perfect poise of character without being thought disagreeably strong-minded, or unwomanly.

There are many other fine qualities which go to make up the characteristics of the ideal trained nurse, of which I might speak. There is the power of concentration, *i. e.*, the ability to fix one's mind on the work in hand to the exclusion of everything else, more useful than cleverness or genius. I might speak, too, of steadiness of purpose, the keeping of the goal of success right in view and working hard to reach it, of strict integrity, of modesty not only in demeanor but also in the assuming of responsibility, of self-reliance, which you must cultivate in no small degree. You will be left often to act in an emergency on your own responsibility in a critical case. Here you must use that good judgment which is developed by the mental training which you will gain from study and good reading, for it is by these means that the mind is trained and its best faculties developed. Don't think that the technical part of your profession is all you need to know. Otherwise you will become narrow and your mental powers stunted.

One possessing these virtues which I have enumerated (and I am using the word in the Latin sense) will develop that fine combination which we all admire in true womanhood,—sweetness and strength.

Now it only remains for me to congratulate you, in behalf of your friends and in my own behalf, that you have finished your course of training, and that you will receive the honors of this school, the evidence of your careful preparation for the work in which you are to engage, and of your fitness for it. But more especially I want to congratulate you on the wide and splendid field for usefulness which stretches out before you. What opportunities you will have for being of use in this world! What blessed privileges of being messengers of mercy, carrying comfort, relief, and refreshment to the suffering and distressed! What chances for the display of virtues which make up strong character as a result of which come high living and noble thinking! Let your aims be high. Mediocrity in any field of work is easy of attainment. The Florence Nightingales, Sister Doras, and Clara Bartons are yet to be found in the ranks of your profession. Let your place be among the very best, and

in the front rank. Think that you carry with you the prestige of your Alma Mater. Fill your life full of the riches which this opportunity for a woman's best work offers you. You are going out into the world to be of use and to do work, hard work, but it will be noble work, for work is noble when done with high motives and high purposes. I trust yours will be done with a patient, brave, and loving spirit. Your usefulness is not to be confined within the narrow limits of a social set or clique with whom you may be thrown, but it will find its sphere out in the busy world of men and women in the bustle of life, wherever you may be called upon to relieve a suffering fellow being. How noble the calling! How grand the opportunities!

Many a one of your sisters, living a life of ease and luxury, surrounded with all the external pleasures which wealth can give, if she followed the better instincts of her woman's nature, would change places with you tonight and take her place among the world's workers. She would be happy in the change, but you would not change places with her. You will be called upon to sacrifice ease, personal comfort, and it may be to risk even life itself in the performance of duty. There will be chances to display the noble and heroic traits of character, and to earn that priceless reward of a life devoted to high ends and to the noble purpose to make this world better for having lived in it, and when the crisis of your trial comes and the choice must be made, may you be found among those who have chosen the good part.

Believe me, there is no satisfaction in a life which is lived merely for one's self. Be faithful to your trust. Be patient, be brave. What, after all, is the highest aim in life but to be of use to our fellows, and he or she who has the widest field for doing good in this world, and cultivates that field well, is the one whose life will be the richest, the happiest, the best.

In closing let me quote to you some verses from one of our most delightful American poets and writers, which have been an inspiration to me, and I trust they may be to you.

"Let me but do my work from day to day,
In field or forest, at the desk or loom,
In roaring market-place, or tranquil room;
Let me but find it in my heart to say,
When vagrant wishes beckon me astray,—
 'This is my work; my blessing, not my doom;
Of all who live, I am the one by whom
This work can best be done, in the right way.'

"Then shall I see it not too great nor small,
To suit my spirit and to prove my powers;
Then shall I cheerful greet the laboring hours,
And cheerful turn, when the long shadows fall
At eventide, to play and love and rest,
Because I know for me my work is best."

SERVICE MANUAL.

A strict observance of the following rules is the established condition of all contracts for service with the New Hampshire State Hospital; and any applicant for a position not willing to observe them strictly, will do better to seek employment elsewhere.

1. Any employee wishing to leave the premises to go into the city or elsewhere must apply at the office, that such absence may be understood; and all must be at the hospital at 10 o'clock in the evening, unless away later by permission.

2. It is expected that all persons employed will consider that, on the condition of their respective contracts, they have engaged their time and best services to the hospital; that it is inconsistent with their duties to hold any political office; that they are under obligations to do every duty assigned them, promptly and faithfully; that they will feel personally interested in the good care, safety, and welfare of the patients, and that they will give their personal influence in support of good order and the established regulations of the institution. To this end it is most desirable that all should cultivate quiet, kind, and dignified manners and correct habits in all things, considering always that this is no less for the interest of the employee than for that of the employer.

3. Those proposing to discontinue their services will give at least thirty days' notice, that time may be given to supply their places.

4. That the house may be quiet, it is expected that all will be at their own rooms after 10 o'clock in the evening, at which time the house is closed for the night. After this time the quiet of the house must not be disturbed by passing and conversation. All must bear in mind that the repose of the

patients is a thing of prime importance. All having duties must rise at the morning bell, and proceed to the performance of the same.

5. No light must be carried about the building except in a lantern, and the greatest care must be taken in the use of matches, that none be left exposed. A little carelessness in this thing might be followed with the most serious consequences. No smoking will be allowed in the hospital buildings, except in the smoking-room provided for that purpose.

6. No one will invite visitors to stop in the house without permission to do so; but on application all reasonable privileges will be granted.

7. No one shall employ a patient to do private work for himself or herself without the consent of the superintendent, assistant superintendent, or other officer authorized to give such permission; and no one is allowed to trade or make bargains with patients.

8. Provision is made to afford each person employed a vacation of two weeks in the year, during which time the duties of the position will be done by a substitute; but the superintendent does not guarantee to retain the place of any one for a longer term of absence. On leaving for a vacation, or permanently, every one will deliver his or her keys at the office.

9. Whenever patients are encouraged to engage in any kind of labor, it is with a view to their own benefit; and hence no one will be taken from the halls for that purpose unless some order to that effect has been given in the case.

10. The person taking patients to labor will be held strictly responsible for their safety, kind care, and safe return to their respective halls.

11. All farmers or others to whom patients are intrusted for labor will remember that they are not to be treated as servants; they will avoid all appearance of commanding, and will exercise the greatest care that no willing one shall be made a drudge or work too long. It will be treated as a grave offense if any employee shall take advantage of the willingness or

mental weakness of any patient, to impose on such one the harder or more unpleasant parts of the work on which they are employed. The head farmer is required to see that this rule is obeyed in spirit and letter, and report promptly to the superintendent any violation of the same. As occupation is a thing of the greatest value to most patients, every employee is required to do all in his or her power to interest them in it in some form, and make it attractive.

As far as practicable, provision will be made to give each employee opportunity to be absent from duty for church services on Sunday a due proportion of the time; and any whose ordinary labor is wholly suspended on Sunday are liable to be called on to relieve others whose duties continue a portion of the time, and such must hold themselves in readiness to be so called on. It is expected that all employees, whose duties do not interfere, will be present at the regular Sunday service in the chapel.

STEWARD.

The steward will have the general oversight of the building, farm, stock, and premises. It will be his duty to attend to ordinary business transactions, and see that hospital property in every department is saved, kept in its proper place, protected from harm or waste, and properly used. He will see that everything about the premises is kept in good order, that the grounds near the house are kept clean, free from waste and rubbish, and will extend the same supervision to the basement and attics, and see that the person to whom it is assigned to care for these spaces discharges his duty faithfully. He will see that all animals are properly taken care of, and that carriages, tools, and implements are kept in repair, and stored in their places when not in use; and, generally, he will be responsible to the superintendent for the good condition of property and premises, and must properly notify him of anything adverse to the welfare of the hospital which comes to his knowledge. He will attend to procuring ordinary supplies for subsistence, except so far as otherwise provided for by the superintendent, and see that such goods are delivered

and stored in their proper places. He will see that the house is closed and the doors locked at the appointed hour at night, and hold himself ready to discharge any special duty required by the superintendent.

CLERK.

It will be the duty of the clerk to keep the books and accounts in a neat and accurate manner, take systematic care of all papers connected therewith, and perform any special clerical work required by the superintendent.

HOUSEKEEPER.

SECTION 1. The housekeeper will have the general management of the internal domestic affairs. The labor in the kitchen, laundry, and sewing department will be done under her direction; and those employed in these departments will hold themselves subject to her orders in the discharge of their duties. She will attend to the good condition of all apartments connected with the general housekeeping, will see that they are properly furnished, and kept in good order. She will see that all the work in her department is done in accordance with the general instructions of the superintendent.

SECT. 2. She will have the care of all goods and material used in her department, and will see that they are saved and economically used; all bedding and articles manufactured for housekeeping purposes will be under her care, and she must see that they are not wasted or given out needlessly. She will have the care of the making of any clothing furnished to female patients, and will be required to keep an accurate account of the cost of such clothing or other articles furnished to any one. The cost of any articles furnished for patients must be returned by her to the supervisor, to be entered in the accounts of such patients.

SECT. 3. It is the duty of the housekeeper to report to the superintendent any instance of misconduct, failure in the proper discharge of duty, or violation of the established regulations occurring in her department, and not promptly recti-

fied by the delinquent. It will also be her duty to report to the person who keeps the time-book the times of commencing and leaving duty of all employed in her department.

SUPERVISORS.

SECTION 1. The supervisors in their respective departments will have the general oversight of the halls and the patients; and the prudence and tact with which their duties are performed will be an important factor in the condition of the house. It is expected that they will see that the rules of the house relating to the patients are observed in every particular; that all patients are treated with uniform respect and kindness; and it is their imperative duty to report immediately to the superintendent or assistant superintendent any instance of neglect, incivility, or ill usage of a patient, or any violation of the established rules.

SECT. 2. They will see that all medicines prescribed are faithfully and in a proper manner administered, and that all directions of the medical officers are strictly obeyed.

SECT. 3. They will be expected to pass as much time in the halls as the proper discharge of other duties will allow, will instruct new attendants in their duties, and as much as possible assist in efforts to interest and employ the patients.

SECT. 4. The supervisors must see that the dining-rooms are furnished with the necessary utensils, that the attendants take proper care of the dining-rooms, that the cupboards are sweet and in order, the tables neatly set, and the meals properly served.

SECT. 5. They will have the general charge of the clothing of the patients, and an oversight of the beds and bedding of the halls. The attendants must report to them any deficiency in either which may exist, and it is their duty to see that such wants are supplied.

SECT. 6. On the admission of patients, their clothing will be taken in charge by the supervisors, entered in the book provided for the purpose, and each article plainly marked.

All articles afterwards furnished or received will be cared for in the same manner.

The clothing of patients leaving must be compared with the record, neatly packed, and delivered at the office by the appropriate supervisor.

Any knives, razors, or other dangerous articles in possession of a patient on admission must be brought to the office for safekeeping and record.

SECT. 7. They will pay special attention to the sick, report promptly at the office any change of symptoms, see that they have proper attention, and that any special diet prescribed is delicately prepared and served.

SECT. 8. After passing through the halls and learning the condition of the patients early in the morning, the supervisors will very briefly report to the physicians any sickness or other fact demanding attention before these morning visits.

SECT. 9. Before the Sunday chapel service, and other occasions of public gathering, the supervisors will see that the patients are properly dressed for the occasion, and accompanied to the chapel by their attendants.

SECT. 10. The supervisors will report to the clerk the times of commencing and leaving off work on the part of the attendants employed in their respective departments.

SECT. 11. In general, the supervisors are expected to hold themselves in readiness to carry into practical effect the instructions of the superintendent, and to use all their personal influence in support of the spirit and design of these regulations.

ATTENDANTS.

A strict observance of the following rules is the established condition of all contracts for service in the wards of the New Hampshire State Hospital. It is expected that any applicant for the position of attendant who is unwilling to observe them strictly will do better to seek employment elsewhere. Having accepted such a position, any violation of them will be considered a breach of contract and treated according to the nature of the offense.

1. Any attendant wishing to absent himself from the premises after 10 o'clock in the evening will leave word to that effect at the office, that such absence may be understood.

2. That the house may be quiet, it is expected that all will be at their own rooms after 10 o'clock in the evening, at which hour the house is closed for the night. After this time the quiet of the house must not be disturbed by conversation or passing to and fro. It is expected that all lights will be extinguished at that hour; and it is the duty of the night-watch to extinguish any light burning unnecessarily during the night as well as to report the same at the office. It is expected that any employee on leaving his room during the evening shall extinguish the light.

3. No light shall be carried about the building except in a lantern. All employees will use, in the service of the institution, the safety matches provided by the management. Only one box at a time will be furnished. The old box must be returned before a new one will be issued. *Attendants must never give matches to patients.*

4. Smoking in any room or ward is strictly prohibited.

5. The use of liquor in any form is positively forbidden.

6. Any attendant wishing to leave the service honorably will be expected to give reasonable notice of his intention to leave, preferably from two to four weeks.

7. Attendants are not allowed to invite their friends, relatives, or strangers into the wards without permission from one of the physicians. No one will invite visitors to stop in the house without permission to do so; but on application, all reasonable privileges will be granted.

8. Attendants will never compel patients to work, but all patients who desire to assist may be allowed to take part in the housework, but under no circumstances must an attendant delegate one patient to take personal care of another patient. Personal care of patients, including feeding, bathing, dressing, and undressing, and the administration of medicines, must never be intrusted to other patients. Attendants will never allow other employees to take patients out of their

ward, either for work or any other purpose, unless special permission has been allowed by one of the physicians.

9. In wards P 1 and P 2 both attendants must be present at mealtime and retiring time, unless one has special permission from the superintendent to be absent. In ward P 3 both attendants must be present at mealtime, but they may alternate evenings off duty from immediately after the attendants' supper until retiring time. In wards with two attendants, both shall not leave their ward at the same time, but they may alternate with each other in the following way: One may have one hour off duty from 11 A. M. until 12 M.; the other may have one hour from 4 till 5 P. M. They may alternate with each other on Sunday from the time the morning dining-room work is completed until 3 P. M.

In wards with one attendant, the attendant will alternate hours off duty with the attendant in the adjoining ward from 11 A. M. until 12 M., and from 4 to 5 P. M., and on Sunday they may alternate with each other from the time the morning dining-room work is completed until 3 P. M. In wards with one attendant, the attendant may alternate evenings off duty with the attendant in the adjoining ward from immediately after the attendants' supper until retiring time. All attendants must be present at mealtime on Sundays as well as weekdays.

10. *Treatment of Patients.* In all their intercourse with the patients, the attendants are required to treat them with respect and civility, to be kind and gentle in manner, and avoid roughness of every kind. In the care of their patients, sympathy, kindness, and tact should take the place of force and display of authority. But if interference with violent and excited patients becomes necessary, sufficient aid must always be procured from the attendants of neighboring wards to avoid personal injury to either patients or attendants. Such aid should be summoned before attempting to deal with the case in hand. Personal conflicts are always to be avoided. Choking, kicking, or striking of patients by attendants is never allowed. Any violation of this rule will be considered a grave offense.

11. No patient shall be restrained or secluded except by order of the physician, save in an emergency; in which case it shall be at once reported at the office.

12. The peculiarities of patients must never be made a subject of sport or ridicule.

13. Attendants will abstain from the use of profane or vulgar language.

14. Attendants will bathe untidy patients as often as is necessary. And once every week each attendant will see that every patient in his ward has a warm bath, and change of underwear, hose, and linen. The attendant must be personally present at the bathing of the patients; especially important is this in the case of the feeble, epileptic, and suicidal. The attendant will see that the water of the bath has the proper temperature. Bathroom doors are always to be kept locked.

15. The attendants will always take care that the clothing worn by patients is adapted to the season and occasion. In case of sudden change from heat to cold, they must make at once the needed change of clothing.

16. It is particularly expected of attendants to see that every patient is cleanly in person; that the hair and nails are attended to; that any rent in clothing is promptly mended; that the garments worn are kept buttoned; and that any stains from carelessness in eating are promptly removed.

17. In suitable weather, the attendants are required to take such patients in their ward as are able into the open air twice daily, either to ride or walk. Newly arrived patients, however, are not to be taken out of their ward until ordered by one of the physicians.

18. In case of sickness or an emergency at night, the attendant may be called by the night watch to render assistance. Such assistance must be cheerfully given.

19. At certain specified hours attendants will give to such patients as are designated by the physicians, medicines that may have been prescribed. This duty must always be performed by the attendant. After giving the medicine, they should wash and return the glasses to the proper place.

20. The keys of the ward are to be kept strictly in the hands of the attendants; they must never be left carelessly about, nor intrusted to patients.

21. At mealtime the attendants must serve the food to the patients, see that each is properly provided for, and personally prepare and feed those who are sick or unable to feed themselves. The patients must not be hurried through their meals. Knives and forks must be accounted for and never carried from the table by patients.

22. *Care of the Ward.* In the morning the attendants will rise at 6 o'clock. They will unlock the doors of patients' rooms that have been locked; see that the beds are aired, the night vessels removed, and as soon as other duties will allow they will remove all soiled clothing, and see that the beds are made according to the prescribed method. Every room must be swept out every morning, as well as the ward and dining-room. Especial attention must be given to the water-closets, urinals, and bathroom. Absolute cleanliness must prevail. The attendants will sweep and wash the stairways leading to their respective wards every morning.

23. The care of the storeroom is extremely important. It is the duty of the attendant to keep each patient's clothing in its proper drawer, to transfer the same with the patient whenever he is moved to another ward by order of the physician or supervisor, and to see that every article of clothing is accounted for and corresponds with what has been furnished by the supervisor.

24. Once every week the attendant will make out a requisition for articles needed for ward use, properly accounting for those that are worn out or destroyed, and give the same to the supervisor.

25. The attendant must shave those patients designated by the physicians or supervisor. In shaving, great care must be taken to have the razor in good order, and to shave easily and neatly. No other patient should be present, and the razor must be kept under lock and key.

26. Patients who attend chapel or entertainments, who go

out to walk or ride, or receive visits from friends or relatives, must be properly dressed, their hair brushed, and their general appearance made as presentable as their mental condition will allow.

27. The hours of meals, of closing the wards at night, and of duty, will be regulated by Eastern standard time. Clocks, regulated hourly by the clock in the office, will be located in the wards at accessible points, and it is expected that all attendants will use this time and no other, regulating their watches and clocks by these standard time clocks.

28. *Hours of Closing Wards.* Attendants in charge of wards 4, 7, P 1, and P 2 will close their wards at 7.30 o'clock P. M.

Attendants in charge of wards 5 and 8 will close their wards at 8 o'clock P. M.

Attendants in charge of wards 9 and P 3 will close their wards at 8.30 o'clock P. M.

Attendants in charge of ward 6 will close that ward at 9 o'clock P. M.

At the above-mentioned hours all lights in the wards indicated will be extinguished.

29. During hours of duty, attendants will remain on their own ward, not in their own room, but on the ward. Visiting from hall to hall during hours of duty, without special business, or going away to other parts of the premises out of one's field of service, is wholly improper, and not allowed.

30. The attendant will hold himself in readiness to accompany the physicians or superintendent when he makes his ward visit.

31. In taking patients out of doors, the attendants must see that no one strays from the party, and so regulate the speed of walking, or the character of other exercise, as to suit, as well as may be, the average of persons present. Preference should be given to walks within the hospital grounds, but when walks are taken into the city, it is not permitted to visit stores, hotels, railroad stations, or other public places, except by permission previously obtained.

32. All damages done to buildings or property by patients must be reported to the supervisor by the attendants.

33. *Duties of Attendants in Case of Fire.* Attendants will observe the following rules in case of fire:

I. Communicate with the office at once, either by speaking-tube or messenger, giving information as to location and extent of fire.

II. Unlock at once every room door, and get every patient who may be restrained or secluded out on the ward, no matter what their mental condition may be.

III. If the fire is in any ward, the attendant on duty will immediately uncoil the hose at the nearest house hydrant and turn on water. For this reason it is expected that every attendant will familiarize himself with the location of the various hydrants. In wards 4, 5, and 6, the hydrants are located on the stairway leading from office to those wards. In wards 7, 8, and 9, the hydrants are located in the west end of the ward in the closet marked "Hose Closet." In the Peaslee building the hydrants are located on the stairway leading from the wards of that building to the basement. On each of these hydrants there is hose attached sufficient to extend to the next line of hose. The water can be turned on by opening valve, which turns toward the right. Be sure and uncoil hose and get out all knots or twists before turning on water.

IV. If the fire is in any other part of the building, the attendants will remain on their own wards, first getting all of their patients out of the rooms. They will wait for further orders.

V. If ordered, or if necessary, they will move the patients out of the ward through the exit that is most remote from the fire. In moving patients at such a time, it is imperative that there should be as little confusion and excitement as possible. The attendant should have his patients file out in line, and be particularly careful to avoid confusion on the stairways.

VI. After patients are removed from the ward, the attendant must remain with them, keeping them together, and await orders from supervisor or physicians.

COOK.

Under the direction of the matron, the cook will have the supervision of the work in the kitchen, the care of utensils, and of supplies of provisions within the kitchen premises.

The cook must see that the kitchen and all utensils are kept clean and in perfect order, that good order is preserved in the kitchen, and that each employee performs all duties assigned in a proper manner.

The cook shall see that all food is prepared as directed, is made palatable and inviting, and sent to the halls hot. Special care must be taken in preparing messes for the sick, that they are nicely cooked, and sent to the patients in acceptable form.

The cook shall report to the matron any instance of failure in duty or violation of the rules occurring in the department.

Persons employed elsewhere in the institution will not be allowed to loiter about the kitchen premises or bakery.

If any meat, butter, or other articles of food, of poor quality, are furnished for use, the head cook must promptly report it to the steward or superintendent.

BAKER.

The baker will see that the baking-room, oven, and all utensils belonging to his department are kept scrupulously clean at all times, that the house is kept supplied with the various kinds of bread prescribed, and he must keep his stock of bread sufficiently in advance of the demand that it may not be eaten absolutely new. On the mornings designated, he will make warm rolls or biscuit in season for breakfast.

It is his duty to report at once to the superintendent or steward any defect he may discover in the quality of the flour or other material for food furnished to his department.

PORTER.

The porter will have the whole charge of the food car, and will keep it always clean and in good order; will, at the ap-

pointed times, take the prepared meals from the kitchen to the several dumb-waiters, and deliver them to the attendants, who shall be present at the call of the slide-bell, to assist the porter in running up the dumb-waiter, if necessary, and remove the meals carefully to the dining-rooms. In this, care must be taken by all that the food and utensils are handled gently, and that the meals reach the tables in good order. In like manner must the dishes and slops be received from the attendants by the porter, and by him be properly disposed of.

The porter will be responsible for keeping the basement and attics swept and everything in its place. It is also his duty to fill the underbeds for the female attendants, great care being taken that the sacks be not soiled in the process. He will also remove the discarded beds each morning to the place designated. At the appointed times the porter will attend to instructions of the superintendent. He will see that any object thrown from the windows during the night is removed promptly in the morning, and will hold himself ready to perform any item of duty required by the superintendent.

ENGINEER.

The engineer will be responsible for the good care of the boilers, engine, steam, and water pumps, and all parts of the machinery, which must be kept in repair and in good running order. He shall promptly attend to the repairs needed in steam or water apparatus or other repairs or alterations assigned to him. It will be his duty to see that the boilers are properly fired, and the fuel used in the most economical and efficient manner. He will see that the radiators, air-chambers, and flues are properly adjusted for heat and ventilation, and that the amount of steam generated is wisely adapted to the state of the weather. It will be his duty in summer to attend to all needed alterations and repairs in steam-heating apparatus, preparatory to the demands of winter.

He must at all times be so thoroughly familiar with the location and condition of all hydrants, hose, or water cocks provided for the extinguishing of fire, that he may put them

in operation instantly, if needed. He will also be expected to hold himself in readiness to attend to any special duty required by the superintendent.

FARMER.

The head farmer will have the immediate supervision of the farm laborers, the laying out of the work, and the direction of the care and use of the stock and farming utensils; and all farm laborers will look to him for specific directions as to their duties.

It is his duty to see that all farm fences are kept in repair, and that everything on the farm and about the farm buildings is kept in perfect order, that the stock is well cared for, that every farmer performs his duty well, and that all material is properly and economically used. He will report to the clerk the time of service of each person in his department, and to the superintendent any fault or failure in duty on the part of any under his charge.

MEDICAL REPORT.

MEN'S DEPARTMENT.

To the Superintendent:

A brief *résumé* of the work done in the different departments of the hospital includes training school, pathological laboratories, and the medical and surgical wards.

THE INSTRUCTION TO NURSES

Has consisted of lectures at stated intervals on drugs and medicines, poisons and their antidotes, anatomy, physiology, hygiene, and infant feeding. In addition to the above the pupils have received instruction in bandaging and the use of appliances in minor medical and surgical work, with apparent beneficial results. Each nurse is required to serve three weeks of her course in the drug room in the preparation, compounding, and filling of prescriptions under the physician's directions. Since the last report an innovation has been established, a small surgical room, where the minor cases are treated and the nurse instructed in the dressing of wounds, application of poultices, etc., which is of much assistance to them when they go out on the district nursing work, as well as of great advantage to the hospital. The majority of the nurses have shown a goodly interest in their work and have faithfully applied themselves to the same.

PATHOLOGICAL WORK.

The amount of work done in this department has been necessarily small, due in a great measure to lack of time. Only in the more difficult cases has much been attempted. Urinary examination, microscopical as well, is performed in all cases

and a complete record is kept, associated with the case record. In the pathological section we have had a less number of autopsies than usual, there having been ten in the last two years. It has been impossible in a great number of cases to obtain the consent of friends or guardian. Those performed were very interesting. Pathological diagnosis and slides of sections were kindly made at the Pathological Department of Dartmouth Medical College, by the kindness of Dr. H. N. Kingsford, the pathologist. Among them the following are of especial interest:

Case I. Pathological diagnosis—Papillary adeno carcinoma of liver, involving bile ducts, a cirrhotic condition of tail of pancreas, and cirrhosis of both kidneys. The immediate cause of death was perforation of stomach.

Case No. II. Tubercular peritonitis caused death. Patient had been phthisical for some time. On autopsy quite a general involvement of the lungs was found.

Case No. III. Death was caused by structural brain disease. There was a general involvement of the cerebrum and cerebellum, also the pons, and a degeneration of the spinal cord. The degeneration of the organs showed a softened condition. There was no special diseased condition of the other organs.

WARD SERVICE.

In this department considerable work has been done. The standard which this hospital has acquired has as far as possible been maintained. We have had no serious epidemics. Our sick ward had for a long time been under the bane of erysipelas. Cases were occurring constantly, and were most severe. Many of the patients in their enfeebled condition died. Last spring this ward was thoroughly disinfected with formalin, and in addition all rooms were washed with a bichloride solution. Since this we have had a very small number of cases and none for about nine months.

A case of enteric fever developed last fall in one of the attendants, who was properly isolated, and after a long, tedious illness recovered. No new cases followed. Our patients as a

rule have enjoyed very good physical health. They have been allowed more freedom than ever before, which takes away much of the rigidity of hospital life and is much appreciated. Many of our new cases were men advanced in years, who on account of extreme irritability were unable to be cared for at home. These patients as a rule live but a few weeks and are made as comfortable as possible in their declining life. We have had a goodly number of acute cases. Their recovery has been most satisfactory. Several cases of dementia precox have been treated on thyroid extract with no striking effect. The efficiency of this treatment is doubtful in my mind. One obvious need of this hospital is an isolation house, where our tubercular cases can be treated without detriment to the lives of their associates with whom they now mingle.

Surgically we have had several cases of minor interest, as boils, furuncles, septic infections, and one case of cancer which has not been amenable to treatment.

In the course of medical treatment we have kept in touch with modern methods. All of our cases, or nearly all, on admission have been subjected to the rest treatment. A thorough trial has been given this method and its value cannot be overestimated. The patients object to this at first. Absolute rest is enforced, and with a proper diet the patient in nearly all cases makes a good recovery. For our tubercular patients, the open-air treatment has had a beneficial effect. A tent to shield the sick from the sun was erected and the infirm from the sick ward we carried out and they had their meals served to them out of doors. The effect was magical. A very small number were left upon the ward and the hygienic conditions were greatly benefited thereby.

We have had a larger number of patients out of doors during the summer than ever before. This has been our one point of pride, and is unequaled, I think, by any other hospital of this magnitude. Eight wards were vacated entirely, a thing never done before. Every excited patient was out in the pure air both morning and afternoon, and the effect was very noticeable. Patients who were noisy when in the house were more

quiet outdoors, and the general department has been very good. Out of a population in this department of 225 to 232, all but six or seven have been outdoors. This method of treatment should be maintained. No patient has escaped while out exercising, due to the extreme watchfulness of the attendants. One or two who were working out abruptly left. Two escaped from the house. Only two attempts at suicide were made and both were unsuccessful.

Many of the wards have been of necessity overcrowded. This state we hope to have relieved at no distant day.

Nothing especially new has developed in the use of new drugs. Dormiol has maintained in a measure its reliability in a certain number of cases. Cold packs have had a more or less beneficial effect. Hyoscine-hydrobromate in cases of alcoholism retains an important place with quiet rest and a light, nutritious diet. The older drugs, true and tried remedies, maintain their old reputation.

Thanking the superintendent for his kind advice and aid in this department,

I am, respectfully,

CHARLES S. WALKER, M. D.

MEDICAL REPORT.

WOMEN'S DEPARTMENT.

To the Superintendent:

The following report of the medical work upon the women's wards of the New Hampshire State Hospital is most respectfully submitted:

The service during the biennial period ending October 1, 1902, has been more full than at any previous time in the history of the institution. Two hundred and thirteen women were admitted to the hospital and 147 discharged. Of the latter 27.7 per cent were recovered and 26.76 per cent were improved, making a total of 54.46 per cent of those materially benefited before discharge. Among the patients received were many senile cases and others whose mental condition was such that no remedial treatment could be of any avail, but who could be made comfortable by hospital care or who required custodial and routine supervision. There was, however, a considerable number, 43 per cent, suffering from the acute psychoses, and who severely taxed the more strictly hospital resources at our command and made us realize more fully than heretofore the pressing need of modern hospital ward accommodation, where such persons could be placed in an environment most conducive to their physical and mental recovery.

The daily average population for the two years has been 232.43 women. The wards were more than usually crowded during the first half of the period, owing to the material increase in admissions; but the sudden advent of the inmates of the Merrimack county farm in November, 1901, produced a congested condition in certain wards inimical to the good health and comfort of all our residents. It is therefore with

especial satisfaction that we are able to report a decreased amount of sickness among our population, and a good hygienic condition throughout the hospital. With the single exception of the short epidemic of diphtheria, imported from without, and of which a full account is given elsewhere, no infectious disease has appeared in our wards. Attacks of acute diarrhea, which have been frequent in former years among certain of the demented and feeble patients during the summer months, have much diminished in number, and during the last summer in particular have been practically absent.

All of our patients have spent a larger number of hours in the open air than formerly. On suitable days the wards were deserted by all except the bed patients, and a few whose bodily infirmities precluded the possibility of their getting upon the grounds. The patients were so distributed in small groups as to preserve so far as possible the classification of the wards, and the quiet, comfortable patients gathered in a remote part of the grounds. This practice has been especially beneficial to the very demented class of patients of uncleanly habits and whose psychic state is ever one of restlessness. These patients have passed every pleasant day upon the edge of a small pine grove, where they could sit in the shade or lie upon the grass in the sunshine. In a large measure their habits have been controlled, their restless spirits calmed; they have become more orderly, less given to destructiveness, had better digestion, and have been in every way more comfortable. It is no new thing getting the patients thus upon the grounds, but it has been more thoroughly done, and every capable patient has joined in the exodus rather than a few willing ones.

During the last year the nurses have been more persevering in correcting uncleanly habits, and we feel confident that with suitable dormitories for the untidy class and fuller night supervision the number of untidy patients could be limited practically to certain cases of organic nervous disease.

All of those patients suffering from an acute psychosis on admission require rest in bed and hospital care for a period varying from a few days to several weeks. Senile cases are, as

a rule, subjected to the same treatment during their periods of restlessness. No therapeutic innovations have been introduced during the last two years. The use of wet packs is continued with satisfactory results and we persistently administer the thyroid preparations where indicated. The employment of hypnotics in hospitals for the insane is often condemned, and there is doubtless much truth in the assertion that their administration is often unwarranted, degenerates into abuse, and is not infrequently a cause of grave nutritional disorder. They have a legitimate field of usefulness in our work, however, and we do not hesitate to prescribe such hypnotics as are required to relieve insomnia or to quiet a noisy patient, often the cause of the wakefulness of an entire ward. All of the standard hypnotics have been used and as indicated, but during the last two years we have used dormiol more than any other drug of this class, finding it safe and without any disagreeable after-effects. We have yet to see any untoward effects from its administration. Hedonal has also proved of value in a variety of conditions accompanied by varying degrees of insomnia, but particularly in cases without great mental excitement where there is simple wakefulness and motor restlessness. We have no patient taking a nightly hypnotic, but have administered such drugs only in single doses and at irregular intervals. The night reports show about 1.25 per cent of the patients nightly receiving such a dose and but one patient taking a hypnotic upon several successive nights—at the most five nights, and then an interval of several days before the repetition.

In twenty-two patients manifesting more or less pronounced katatonic symptoms, persistent refusal of food has called for much tactful management on the part of the nurse, and it is satisfactory to report the care of these cases with less frequent resort to the use of the nasal tube. Many patients have shown marked suicidal tendencies and attempts at self-destruction were not infrequent. One suicide occurred, and by a patient in a second attack of mania, who had not manifested any inclination to the act and who doubtless was carrying out a suddenly conceived and unpremeditated impulse.

Forty-three patients died during the biennial period. Autopsies were had upon but six of these. Each autopsy brought to light many interesting conditions and demonstrated anew the importance of such investigations in all possible cases. In three cases sudden death resulted from organic heart disease with the calcareous deposits in the valves, atheromatous patches throughout the aortic, and the formation of large white fibrous clots which filled the left ventricle and extended through the aortic opening. One of these patients dropped dead while preparing for bed soon after supper. The other two suffered from symptoms of heart embarrassment for only twenty-four to thirty-six hours before death. One patient suffering from pulmonary tuberculosis of several years' duration died after a few hours of illness, very suddenly, from a rupture of the coronary sinus. Material from recent autopsies calling for microscopic examination has been sent to Dartmouth Medical College, where this work was kindly done by the pathologist, Dr. Kingsford.

In addition to the clinical and laboratory work a considerable amount of time has been devoted to the instruction of the nurses in the training school. Fifteen lectures have been given to the classes each year by the physician in charge of the service, and over eighty afternoons and evenings devoted to section teaching, quizzing, etc. This work has taken much time, and some of it required considerable preparation that the nurses might derive the fullest possible benefit from the instruction received. That this time has not been wasted is manifest by the increased earnestness and skill of the nurses, the growing interest in the prosecution of their duties upon the wards, and the success of those who have undertaken general nursing outside of the hospital.

The meeting of the American Medico-Psychological Association at Montreal, P. Q., was attended in June, 1902, and much pleasure and benefit derived from the papers and discussions there listened to. For this opportunity, as well as for much helpful counsel and assistance, I desire to express grateful appreciation.

FREDERICK L. HILLS.

SUCCESSION OF OFFICERS.

TRUSTEES.

Appointed.	Name.	Residence.
1838 or 1839.	George W. Haven,	Portsmouth.
	Samuel E. Coues,	Portsmouth.
	John Conant,	Jaffrey.
	Amos Twitchell,	Keene.
	John H. Steele,	Peterborough.
	Josiah Quincy,	Rumney.
	David Abbot,	Nashua.
	Joseph Low,	Concord.
	Isaac Hill,	Concord.
	Charles H. Atherton,	Amherst.
	Dixi Crosby,	Hanover.
	Charles H. Peaslee,	Concord.
1840, June 20.	Daniel Abbot,	Nashua.
June 20.	Amos Twitchell,	Keene.
June 20.	Ichabod Bartlett,	Portsmouth.
June 20.	John Conant,	Jaffrey.
June 20.	Joseph Low,	Concord.
June 20.	Charles H. Peaslee,	Concord.
June 20.	Ira St. Clair	Deerfield.
June 20.	Charles A. Cheever,	Portsmouth.
June 20.	John P. Hale,	Dover.
June 20.	Charles J. Fox,	Nashville.
June 20.	Samuel Swasey,	Haverhill.
June 20.	John S. Wells,	Lancaster.
1841, June 15.	Enos Stevens,	Charlestown.
June 15.	George W. Kittredge,	Newmarket.
June 15.	Joseph Low, reappointed,	Concord.
1842, June 7.	Moses Norris, Jr., <i>vice</i> John S. Wells, resigned,	Pittsfield.
June 7.	John Conant,	Jaffrey.
June 7.	John H. Steele,	Peterborough.
June 7.	Samuel Swasey,	Haverhill.
1843, June 19.	Moses Norris, Jr.,	Pittsfield.
June 19.	Ira St. Clair, reappointed,	Deerfield.

1843,	June 19.	Charles J. Fox, reappointed,	Nashville.
1844,	Nov. 20.	Samuel E. Coues,	Portsmouth.
	Nov. 20.	Franklin Pierce,	Concord.
	Nov. 20.	Chas. H. Peaslee, reappointed,	Concord.
	Nov. 20.	William Plumer, in place of J. H. Steele, resigned,	Londonderry.
1845,	June 30.	Abiel Walker, <i>vice</i> Joseph Low,	Concord.
	June 30.	A. McFarland, <i>vice</i> G. W. Kit- tredge,	Meredith.
	June 30.	Timothy Hall, <i>vice</i> Enos Stevens,	Keene.
	June 30.	Luke Woodbury, <i>vice</i> C. J. Fox,	Antrim.
	June 30.	William Plumer, Jr., <i>vice</i> S. E. Coues,	Epping.
	Dec. 23.	James Farrington, <i>vice</i> A. Mc- Farland,	Rochester.
1846,	July 10.	Nathaniel S. Berry,	Hebron.
	July 10.	George B. Upham,	Claremont.
	July 10.	William Plumer,	Londonderry.
1847,	Aug. 9.	Jos. B. Walker, <i>vice</i> A. Walker,	Concord.
	Aug. 9.	Israel Hunt, Jr.,	Nashua.
	Aug. 9.	Warren Lovell,	Meredith.
	Aug. 9.	Thomas Shannon,	Moultonborough.
1848,	June 26.	William Plumer, reappointed,	Epping.
	June 26.	Franklin Pierce,	Concord.
	June 26.	R. Metcalf, <i>vice</i> G. B. Upham,	Newport.
	June 26.	Chas. H. Peaslee, reappointed,	Concord.
1849,	July 3.	Joseph B. Walker, “	Concord.
	July 3.	Joseph H. Smith,	Dover.
	July 3.	Amos A. Parker,	Fitzwilliam.
1850,	July 5.	Ralph Metcalf, reappointed,	Epping.
	July 5.	Isaac Ross, <i>vice</i> N. S. Berry,	Hanover.
	July 5.	David Pillsbury, <i>vice</i> William Plumer,	Chester.
1851,	July 4.	Charles Burroughs, <i>vice</i> T. Shannon,	Portsmouth.
	July 4.	Israel Hunt, reappointed,	Nashua.
	July 4.	Warren Lovell, “	Laconia.
1852,	June 19.	Franklin Pierce, “	Concord.
	June 19.	William Plumer, “	Epping.
	June 19.	Chas. H. Peaslee, “	Concord.
1853,	July 1.	Jos. B. Walker, reappointed,	Concord.

1853,	July 1.	Joseph H. Smith, reappointed,	Dover.
	July 1.	Amos A. Parker, "	Fitzwilliam.
1854,	July 15.	Ralph Metcalf, "	Newport.
	July 15.	Samuel Herbert,	Rumney.
	July 15.	Enoch D. Yeaton,	Wakefield.
	Sept. 29.	J. A. Richardson, <i>vice</i> William Plumer,	Durham.
1855,	July 10.	Rufus Clement,	Concord.
	July 10.	Alvah Smith, <i>vice</i> Ralph Metcalf,	Lempster.
	July 10.	Chas. Burroughs, reappointed,	Portsmouth.
1856,	Feb. 23.	Timothy Haynes, <i>vice</i> R. Clement,	Concord.
	July 11.	John Preston,	New Ipswich.
	July 11.	Chas. H. Peaslee, reappointed,	Concord.
	June 30.	George B. Twitchell,	Keene.
1857,	June 30.	Jos. B. Walker, reappointed,	Concord.
	June 30.	John H. White,	Lancaster.
1858,	June 26.	Jeremiah F. Hall,	Wolfeborough.
	June 26.	Ralph Metcalf, reappointed,	Newport.
	June 26.	Samuel Herbert, "	Rumney.
	Sept. 28.	Edw. Wyman, <i>vice</i> R. Metcalf,	Newport.
	June 27.	Chas. Burroughs, reappointed,	Portsmouth.
1859,	June 28.	Timothy Haynes, "	Concord.
	June 27.	Woodbury Melcher,	Gilford.
1860,	June 27.	J. A. Richardson, reappointed,	Durham.
	June 27.	Charles H. Peaslee, "	Concord.
	June 27.	John Preston, "	New Ipswich.
1861,	July 2.	George B. Twitchell, "	Keene.
	July 2.	Joseph B. Walker, "	Concord.
	July 2.	John H. White, "	Lancaster.
1862,	July 2.	John Conant, "	Jaffrey.
	July 2.	Isaac Spalding,	Nashua.
	July 2.	Moses Clark,	Landaff.
1863,	June 29.	Charles W. Flanders,	Concord.
	June 29.	Chas. Burroughs, reappointed,	Portsmouth.
	June 29.	Woodbury Melcher, "	Laconia.
1864,	July 7.	Chas. H. Peaslee, reappointed,	Concord.
	July 7.	John Preston, "	New Ipswich.
	July 7.	William G. Perry,	Exeter.
1865,	July 16.	George B. Twitchell, reappointed,	Keene.
	July 16.	Jos. B. Walker, reappointed,	Concord.

1865,	July 16.	Denison R. Burnham,	Plymouth.
1866,	June 22.	Charles A. Tufts,	Dover.
	June 22.	John Conant, reappointed,	Jaffrey.
	June 22.	Isaac Spalding, "	Nashua.
	Oct. 23.	Isaac Adams, <i>vice</i> C. H. Peaslee,	Sandwich.
1867,	June 19.	Chas. Burroughs, reappointed,	Portsmouth.
	June 19.	Woodbury Melcher, "	Laconia.
	June 19.	Ebenezer S. Towle,	Concord.
1868,	April 13.	I. Goodwin, <i>vice</i> C. Burroughs,	Portsmouth.
	July 1.	Isaac Adams, reappointed,	Sandwich.
	July 1.	Waterman Smith,	Manchester.
	July 1.	Wm. G. Perry, reappointed,	Exeter.
	July 1.	Ebenezer S. Towle, "	Concord.
1869,	July 1.	Joseph B. Walker, "	Concord.
	July 1.	Geo. B. Twitchell, "	Keene.
	July 1.	Denison R. Burnham, "	Plymouth.
1870,	Jan. 3.	John W. Sanborn, <i>vice</i> Isaac Adams,	Wakefield.
	July 8.	Isaac Spalding, reappointed,	Nashua.
	July 8.	Charles A. Tufts, "	Dover.
	July 8.	Dexter Richards,	Newport.
	Nov. 17.	Ellery A. Hibbard, <i>vice</i> W. Melcher,	Laconia.
1871,	Aug. 9.	E. A. Hibbard, reappointed,	Laconia.
	Aug. 9.	George W. Hayden,	Portsmouth.
	Aug. 9.	Henry Colony,	Keene.
1872,	July 16.	Waterman Smith, reappointed,	Manchester.
	July 16.	William G. Perry, "	Exeter.
	July 16.	John W. Sanborn, "	Wakefield.
1873,	Oct. 23.	Joseph B. Walker, "	Concord.
	Oct. 23.	George B. Twitchell, "	Keene.
	Oct. 23.	Josiah Minot,	Concord.
1874,	July 8.	Isaac Spalding, reappointed,	Nashua.
	July 8.	Charles A. Tufts, "	Dover.
	July 8.	Dexter Richards, "	Newport.
1875,	July 26.	E. A. Hibbard, reappointed,	Laconia.
	July 26.	Charles H. Bell,	Exeter.
	July 26.	Albert Smith,	Peterborough.
1876,	June 22.	David Gillis,	Nashua.
	July 20.	Wm. G. Perry, reappointed,	Exeter.
	July 20.	Waterman Smith, "	Manchester.
	July 20.	Joseph Burrows,	Plymouth.

1876,	Aug. 10.	John V. Barron, <i>vice</i> J. Minot,	Concord.
1877,	Oct. 17.	Jos. B. Walker, reappointed,	Concord.
	Oct. 17.	Geo. B. Twitchell, "	Keene.
	Oct. 17.	John V. Barron, reappointed,	Concord.
1878,	May 2.	J. H. George, <i>vice</i> J. V. Barron,	Concord.
	May 2.	Carlton P. Frost, <i>vice</i> A. Smith,	Hanover.
	July 8.	Dexter Richards, reappointed,	Newport.
	July 8.	Charles A. Tufts, "	Dover.
	July 8.	David Gillis, "	Nashua.
1879,	July 30.	Ellery A. Hibbard, "	Laconia.
	July 30.	Jeremiah F. Hall,	Portsmouth.
	Aug. 14.	Carlton P. Frost, reappointed,	Hanover.
1880,	July 20.	William G. Perry, "	Exeter.
	July 20.	Waterman Smith, "	Manchester.
	July 20.	Joseph Burrows, "	Plymouth.
1881,	Oct. 12.	Joseph B. Walker, "	Concord.
	Oct. 12.	Geo. B. Twitchell, "	Keene.
	Oct. 12.	John H. George, "	Concord.
1882,	June 21.	Emery J. Randall,	Somersworth.
	June 21.	Frederick E. Potter,	Portsmouth.
	Sept. 22.	Dexter Richards, reappointed,	Newport.
1883,	April 26.	William H. H. Mason, <i>vice</i> J.	
		Burrows,	Moultonborough.
	May 17.	E. Spalding, <i>vice</i> F. E. Potter,	Nashua.
	Aug. 28.	E. A. Hibbard, reappointed,	Laconia.
	Aug. 28.	Carlton P. Frost, "	Hanover.
	Aug. 28.	Jeremiah F. Hall, "	Portsmouth.
1884,	July 25.	William G. Perry, "	Exeter.
	July 25.	Waterman Smith, "	Manchester.
	July 25.	Wm. H. H. Mason, "	Moultonborough.
1885,	Oct. 14.	Joseph B. Walker, "	Concord.
	Oct. 14.	George B. Twitchell, "	Keene.
	Oct. 14.	John H. George, "	Concord.
1886,	Sept. 9.	Dexter Richards, "	Newport.
	July 8.	Emery J. Randall, "	Somersworth.
	July 8.	Edward Spalding, "	Nashua.
1887,	Sept. 7.	Ellery A. Hibbard, "	Laconia.
	Sept. 7.	Carlton P. Frost, "	Hanover.
	Sept. 7.	Jeremiah F. Hall, "	Portsmouth.
1888,	Mar. 6.	John E. Barry, <i>vice</i> John H.	
		George, deceased,	Concord.
	Mar. 6.	Franklin D. Ayer, <i>vice</i> J. F.	
		Hall, deceased,	Concord.

1888,	July 24.	Wm. G. Perry, reappointed,	Exeter.
	July 24.	Waterman Smith,	Manchester.
	July 24.	Wm. H. H. Mason,	Moultonborough.
1889,	Oct. 14.	Joseph B. Walker,	Concord.
	Oct. 14.	George B. Twitchell, reap'ted,	Keene.
	Oct. 14.	John E. Barry,	Concord.
1890,	July 8.	Edward Spalding,	Nashua.
	July 8.	Dexter Richards,	Newport.
	July 8.	Morris Christie,	Antrim.
1891,	Sept. 14.	Ellery A. Hibbard,	Laconia.
	Sept. 14.	Carlton P. Frost,	Hanover.
	Sept. 14.	Franklin D. Ayer,	Concord.
1892,	April 5.	Chas. A. Tufts, <i>vice</i> W. H. H.	
		Mason, deceased, reappoint'd,	Dover.
	July 28.	William G. Perry,	Exeter.
	Sept. 17.	John C. French, <i>vice</i> Water-	
		man Smith, deceased,	Manchester.
1893,	Sept. 19.	Joseph B. Walker, reappointed,	Concord.
	Sept. 19.	John E. Barry,	Concord.
	Sept. 19.	George B. Twitchell,	Keene.
1894,	Aug. 1.	Morris Christie,	Antrim.
	Aug. 1.	Dexter Richards,	Newport.
	Aug. 1.	Edward Spalding,	Nashua.
1895,	July 23.	William F. Thayer,	Concord.
	Oct. 22.	John A. Spalding,	Nashua.
	Oct. 22.	Ellery A. Hibbard,	Laconia.
1896,	Aug. 11.	John C. French,	Manchester.
	Aug. 11.	William G. Perry,	Exeter.
	Aug. 11.	E. O. Crossman,	Lisbon.
	Dec. 1.	James A. Edgerly,	Somersworth.
1897,	Sept. 3.	J. B. Walker, reappointed,	Concord.
	Sept. 3.	John E. Barry,	Concord.
	Mar. 17.	Henry B. Quinby,	Lakeport.
	April 6.	George W. Pierce, <i>vice</i> George	
		B. Twitchell, deceased,	Winchester.
	Oct. 7.	George W. Pierce, reappointed,	Winchester.
1898,	Mar. 15.	C. H. Boynton, <i>vice</i> E. O. Cross-	
		man,	Lisbon.
	Aug. 1.	Dexter Richards, reappointed,	Newport.
	Aug. 1.	Morris Christie,	Antrim.
	Aug. 1.	W. F. Thayer,	Concord.
1899,	Feb. 21.	John McCrillis, <i>vice</i> Dexter	
		Richards, deceased,	Newport.

1899, Oct. 22.	Henry B. Quinby, reappointed,	Lakeport.
Oct. 22.	John A. Spalding, “	Nashua.
1900, Jan. 11.	George B. Chandler, <i>vice</i> John	
	C. French, deceased,	Manchester.
July 1.	James A. Edgerly, reappointed,	Somerset.
Aug. 11.	Geo. B. Chandler, “	Manchester.
Aug. 11.	William G. Perry, “	Exeter.
Nov. 22.	John H. Mitchell, <i>vice</i> John E.	
	Barry, deceased,	Concord.
1901, Sept. 3.	J. B. Walker, reappointed,	Concord.
Sept. 3.	John M. Mitchell, “	Concord.
Oct. 7.	George W. Pierce, reappointed,	Winchester.
1902, Aug. 1.	John McCrillis, “	Newport.
Aug. 1.	William F. Thayer, “	Concord.
Aug. 1.	Morris Christie, “	Antrim.

PRESIDENTS.

John H. Steele	1839-1840
John Conant	1840-1846
George B. Upham	1847-1848
William Plumer	1848-1855
Charles Burroughs	1855-1868
Isaac Spalding	1868-1875
George B. Twitchell	1875-1897
Dexter Richards	1897-1898
John A. Spalding	1898-

SECRETARIES.

Dixie Crosby	1839-1841
Charles H. Peaslee	1841-1848
Joseph B. Walker	1848-

TREASURERS.

James Thorn	1839-1840
Joseph Low	1840-1846
John Atwood	1846-1847
Andrew McFarland	1847-1852
John E. Tyler	1852-1857
Jesse P. Bancroft	1857-1890
Charles P. Bancroft	1890-

SUPERINTENDENTS.

George Chandler	1842-1845
Andrew McFarland	1845-1852
John E. Tyler	1852-1857
Jesse P. Bancroft	1857-1882
Charles P. Bancroft	1882-

REPORT

OF THE

NEW HAMPSHIRE

FORESTRY COMMISSION

FOR THE YEARS

1901 - 1902.

CONCORD, NEW HAMPSHIRE.

1902.

PRINTED BY IRA C. EVANS CO., CONCORD.
BOUND BY RUMFORD PRINTING CO., CONCORD.

MEMBERS OF THE COMMISSION.

HENRY O. KENT, Lancaster, *President*.

GEORGE E. BALES, Wilton.

MARSHALL C. WENTWORTH, Jackson.

GEORGE H. MOSES, Concord, *Secretary*.

REPORT.

To His Excellency the Governor and the Honorable Council:

In presenting the summary of its operations for the past two years, the Forestry Commission begs leave to call attention to the general increase of public interest in the question of forest preservation which has been so marked in the time covered by this report.

In the nation not only is a more enlightened policy being pursued by congress and the administrative departments with reference to the care and maintenance of the national forest preserves, the extension of their area and the preservation of their forest cover, but, at its last session, congress took the first steps toward the establishment of a national park to be created out of forest to which the government did not possess the title. This park, situated in the southern chain of the Appalachian mountains, is designed to protect the head waters of the navigable and commercial streams of several states, thus bringing it clearly within the purview of national legislation; and at the same time aims to preserve to the agriculture of those states the beneficial conditions which nothing but forest preservation can perpetuate.

The annual message of President Roosevelt departed in many respects from the stereotyped formulæ used by his predecessors in dealing with matters before the various departments, and in none was it more vigorous and outspoken than in its references to the kindred topics of forest preservation and irrigation. To this stout stand taken by the president may be attributed much of the general public interest which now prevails with reference to forestry. For in his exalted position he was able to attract and to centre the attention of the people whom lesser advocates would be unable to reach.

In our own state Governor Jordan, devoting, as he did, by far the larger portion of his inaugural address to a consideration of some of the pressing needs of forest preservation in the White Mountain region, served to stimulate public interest in the problem in our own state.

SOCIETY FOR THE PROTECTION OF NEW HAMPSHIRE FORESTS.

Perhaps, however, the most directly active of all the forces now at work upon this problem in New Hampshire is the Society for the Protection of New Hampshire Forests, which was formed soon after the issuance of the last report of this board. In the formation of this society the Forestry Commission participated, and the two organizations have cheerfully and harmoniously and actively coöperated in advancing the cause which they both aimed to subserve. Representatives of this board appear in the society's list of officers, and the programmes of both the organizations have been formulated with a view to supplementing the efforts which each is putting forth.

The commission necessarily is restricted in its efforts to work among actual residents—landowners, and forestry enthusiasts in our own state; but the society, being a voluntary organization, is not thus limited, and it has been especially successful in enlisting the coöperation of summer residents and casual visitors, who through its machinery have been brought to add their forces to swell the general attempt to secure better forest conditions in our state.

WORK OF THE BOARD.

The work of the board during the past two years has been pursued along lines which previous experience has shown to be valuable. The commission has sought to extend the scope of its influence among individual landowners, especially among those possessing large areas of timber land in the mountain regions, with a view to securing more rational

methods of management in those forests; and has supplemented this private individual solicitation with public appeals through communications to the press and through addresses delivered before audiences in different parts of the state.

Work of this kind must necessarily produce results which are not wholly tangible, but the improved condition of public sentiment toward forestry in general, the enlarged demand for information respecting the conditions of profitable tree growth, the increasing purpose on the part of lumbermen to utilize their forests so as to ensure perpetual crops of wood material, and a growing desire among small landowners to increase their forest area through tree planting, are claimed by the board to be due in no small measure to the persistent efforts which have been put forth under its auspices during the years since it was first established.

PERSONNEL OF THE BOARD.

A closer affiliation with the interests which control the larger area of the forest cover in the northern counties of the state, and with those interests which are chiefly devoted to the upbuilding of the summer resort business in the White Mountains, has been brought about through changes in the personnel of the board made by the appointments of the governor and council since the date of the last report. The Hon. George Byron Chandler, of Manchester, a member of the temporary commission of 1889 and chairman of this board upon its establishment in 1893, was succeeded in 1901, by Col. Henry O. Kent, of Lancaster.

Colonel Kent, by reason of his life-long residence in the North Country and through his intimate knowledge of the character and topography of the forests of that section gained by his services in conducting the state survey in 1858, brought to the board an accumulation of detailed and valuable information which has been of exceptional value as the board has come to study into some phases of forest conditions in the White Mountains.

The Hon. Napoleon B. Bryant, who was appointed a member of the board upon its inception, and whose talents of oratory were especially helpful in enforcing the lessons which the board sought to convey to the people, died January 28, 1902, and was succeeded by Gen. Marshall C. Wentworth, of Jackson, whose long and intimate connection with the summer hotels of the White Mountains has enabled the board to come more closely into touch with summer resort proprietors whose interest in forest preservation is both obvious and keen.

Through these agencies the board hopes to extend its influence both among landowners and summer visitors to an extent which promises from the results already attained to produce important and valuable additions to the body of public sentiment which is necessary to stimulate and sustain the work of forest preservation, no matter whether it be undertaken from sentimental or economic reasons.

FIELD WORK.

It seemed to the commission essential to the proper conception of forest conditions in the state, that members of the board should have, so far as possible, personal knowledge of our forest area and growth, the actual denudation of mountains and hillsides, the clearings of whatever character near points of summer resort, the conditions attending lumbering and the wood pulp industry, and generally all matters pertaining to forestry in New Hampshire, that they might be able to present a report to the legislature, based upon such knowledge of the subject as would justify practical conclusions and recommendations.

Accordingly, early in 1901, a series of trips was considered, to be taken at convenient intervals, including attendance upon the annual meeting at Washington of the American Forestry Association, whereof the Hon. James Wilson, of Iowa, secretary of agriculture, is president, and with which society Mr. Gifford Pinchot, head of the forestry bureau of the agricultural department, and other leading foresters are associated.

Sundry trips have been made as contemplated, practically covering the entire state and including the meeting at Washington. Much interesting and valuable information has thus been gathered, so that the commission feels it is able to consider existing conditions wisely and to deal with them intelligently, so far as the means and authority placed at its disposal will admit.

Matters thus elucidated or coming under our observation will be treated in their appropriate places, but a general resume of field work is first given, for a better understanding of facts and the sources drawn upon.

THE WHITE MOUNTAINS.

In September, 1901, we rendezvoused at North Conway, examining the stately pines near Intervale Station with the secondary pine areas in the vicinity, passing to Glen Station and Jackson. This section is the heart of the summer business on the eastern side of the Presidential Range, Conway being one of the very oldest resorts. The work of the lumberman has been over for quite a period and save occasional lots there have not been of late, cuttings near the large hotels or favorite drives, that disfigure the scenic beauty of the region. Either cultivated clearings, green with verdure and grateful to the eye as evidencing agricultural thrift, or slopes covered with new growth, replace any reminders of devastation.

At Jackson very much has been accomplished, both by proprietors and residents, in the line of picturesque forestry development along the roads among the extensive and delightful summer estates, so that little seems to be left to complete a perfect picture of mountain and valley forest and cultivated opening, varied by mansion and lodge crowning salient points and emphasizing the completed picture.

From Wentworth Hall we followed up the valley of the Ellis river and down the valley of the Peabody river through the Grants, past Glen Ellis falls, the picturesque site of the old Glen House, which is the point of departure of the carriage road up Mount Washington and the eastern slope of

the great range, to Gorham on the Grand Trunk railroad, on the Androscoggin river near the state line between New Hampshire and Maine, a distance of sixteen miles.

A few miles above Jackson we enter the primeval forest, ascending the height of land, of somewhat greater altitude than the Crawford Notch, about two thousand feet, and continuing through forest growth, with the exception of small clearings at Glen Ellis falls and the Glen House site, nearly to the Libby mills a mile only from Gorham.

THE GLEN ELLIS FOREST.

There is no more delightful and attractive spot in the mountain region than Glen Ellis falls, beloved of tourists, the drives to this favored spot from the great mountain resorts north and south being famed for their beauty. It is to be deeply regretted that such indiscriminate cutting in this forest has occurred. There is no havoc visible on the western side of the road until emerging upon the Glen House site. From there to Gorham the ragged appearance of the hillside and along the stream is depressing. It is to be said, however, as will be emphasized in a summary later, that the years elapsing since the cessation of active operations have covered and hidden by the newer growth much of the nakedness of the land.

The soil around Glen Ellis falls is held by one of the great pulp companies, and we were advised by the commissioners of Coös county that contracts had been made for cutting, during the winter of 1902, the growth around and in the immediate vicinity of these falls.

Immediate steps were taken by us to prevent, so far as possible, such cutting, in order that the public, the preservation societies, and the legislature might have opportunity to protect and preserve this unique and beautiful spot. Hon. Irving W. Drew, of Lancaster, attorney for the owners, interested himself at once and assured us that all operations there would be deferred until opportunity for preservatory action could be taken. There seems to be little

doubt that if private generosity fails to protect this particular spot, the state may properly aid to retain unmarred this choice bit of scenic domain, which opinion attaches to a few other exceptional localities.

The great mills at Gorham have been largely supplied from lands on the mountain slopes draining into the Peabody river, from along its tributaries, and from land not too far distant for hauling the logs to these mills. Here, as elsewhere, the commissioners have urged upon proprietors the wisdom of selected cuttings of matured trees with future crops in view and, as elsewhere, have received assurances that such a policy is commending itself to wise consideration and is yearly receiving greater practical compliance.

Shelburne, the lower New Hampshire town on the Androscoggin, is becoming a most desirable and attractive summer resort. There are no untoward conditions there, either of forest cutting or denudation, and the region becomes yearly of greater repute.

THE ANDROSCOGGIN VALLEY.

From Gorham up the Androscoggin to Berlin, the end of our first trip, little can be said of forestry or its conditions. The eight miles between the two municipalities are given over wholly to roadways, both steam, electric and carriage, for traffic. East of the river the abrupt hillsides were long ago closely denuded of timber and even of trees, so that the strip of farm land along the stream alone remains in attractive guise. The most that can be said is a repetition of our comment on the Peabody river hillside; a new growth of bushes covers the ground, beginning to hide its barrenness. Such of this land as is arable will in due time succumb to cultivation, or be clothed in the green of younger growth.

The Androscoggin here is always picturesque, flowing swiftly through tremendous gorges or over a pebbly bed, conveying at times great reaches of logs for the mills nearer the sea, and supplying power from the great lake reservoirs, accumulating the waters of the vast forest regions in Northern New Hampshire and Northwestern Maine.

An electric road now connects the phenomenal "Paper City," Berlin, with Gorham. In its way the attractions of this reach of the valley have strong claims upon the tourist.

THE CONNECTICUT HEADWATERS.

Late in October the commission met at Lancaster, where a business meeting was holden and conference had with Governor Jordan relative to present and prospective plans, and the ideas of the executive secured as to practical forestry as applicable to existing conditions in the state, embracing the lumber and pulp interests, the encouragement of the summer business, comprehending hotel and boarding-house investments, and incidentally the railway traffic connected therewith. Much encouragement was derived from the exchange of opinions, and facts here elicited are regarded as of great importance in the prosecution of our work.

From Lancaster we proceeded by rail up the Connecticut valley, forty-five miles to West Stewartstown, where we were met by Hon. Thomas H. VanDyke, who conveyed us by carriage twenty-seven miles further north, to the second Connecticut lake, stopping the first night at the Connecticut Lake House at Pittsburg, the point on the first lake whence the river debouches from the parent water and where is the great dam two hundred and eighty feet long and twenty-nine feet high, regulating the flow from this storage reservoir; and where is also the immense fish screen erected by the state across the outlet, a structure five hundred and seventy feet long and twenty-one feet high, wings of wood, respectively three hundred and forty and one hundred and ninety feet, with the centre of iron, forty feet. Here is also a sawmill for the use of the lumber company in preparing timber for dams and supply outfits, and here also is the entrance into the wild timber tracts owned by the Connecticut Valley Lumber Company.

Two miles above West Stewartstown, and just over the national boundary in Canada, is the flourishing village of

Beecher Falls, with important lumber manufacturing industries. The mills largely manufacture hard wood, which is abundant in the adjacent forests. This wood, unlike that of the coniferous trees, cannot be floated, while its weight, to a degree, precludes railroad transportation, hence its manufacture at this remote point, reducing expense by freighting only the finished product.

THE FOREST TOWN OF PITTSBURG.

The town of Pittsburg, wherein are the Connecticut lakes, is twenty miles north and south, with a like average width. Its point is the Crown monument at its northeastern extreme. Herein is the Colebrook Academy Grant, the school grant to Pittsburg, and other timber tracts of great value, well known by name among lumbermen. On the eastern side of the state is the New Hampshire part of that square of twelve miles, extending into Maine, the former territory of Massachusetts, known as the Carlisle Grant, from Thomas Carlisle of Lancaster, a merchant and land speculator of the first third of the last century. This grant was subdivided into three townships—Hubbard, Webster, and Carlisle. Massachusetts, for its province, confirmed this Indian grant, but New Hampshire declined to do so. These lands are embraced within the territorial limits of Pittsburg.

Hall's stream, coming from the Western Highlands of the St. Lawrence, makes a part of the boundary with Canada; Indian stream empties into the Connecticut in the alluvial lands three miles east of the border. It was here in the early forties that the Applebee war, or Indian Stream war, which state troops were ordered out to quell, occurred over disputed jurisdiction. The Canadian government and the state of New Hampshire both claiming the debatable land, but either contestant being lax in enforcing authority, a family named Applebee, with their associates, set up an actual miniature commonwealth, with legislative, judicial, and executive system complete. The state restrained the ambitious promoters, while the Ashburton treaty of 1845 settled disputed jurisdiction.

Perry's stream is the third of the water courses draining this great territory west of the three lakes and discharges into the Connecticut but a mile below the lower or Great lake. East of the lakes the waters either flow into them and so down the Connecticut, or into the Diamonds, the Magalloway and finally into the Androscoggin. It was for years the dream of the state to open up this territory to settlement, and a great part of it was duly surveyed and lotted by the Cross survey of 1844 and the subsequent survey of 1858. These efforts had been abandoned prior to the sale of state lands in 1867, so that, with the exception of a few farms upon the Connecticut and the streams named and in contiguity to the highways along them, the great township is a primeval forest, the only remaining one of equal area in New Hampshire.

THE GREAT NORTH FOREST.

Gradually the grants and smaller timber-land holdings in Pittsburg have been absorbed from individual control, until all are practically the property of the Connecticut Valley Lumber Company; southeast of Pittsburg proper are large contiguous tracts of forest, in Clarksville, Stewartstown, Errol, Dixville, Millsfield, Wentworth's Location, and College Grant,—all making up the great forest of the North Country. This vast region is given over to the lumberman, and save at The Balsams at Dixville Notch, the romantic and admirable holding of Mr. Hale, of Philadelphia, the summer tourist is as yet unknown, unless in the person of occasional sportsmen around the Connecticut lakes, Diamond ponds, or the Umbagog and Magalloway waters.

It is this great tract that emphasizes our later assertion that less than ten per cent. of this North Country area has been mutilated or devastated beyond natural reproduction and that our largest forest area is practically intact.

It is however with Pittsburg proper that we are now dealing. Much of this land has been cut during the last half-century; considerable areas cut with discretion have grown a new crop of timber, in many respects better than the original stand.

Around the Third lake is an open forest of aboriginal spruces—the perfection of primeval growth, with clean floor, straight, tall trunks, undefaced by axe and undisturbed by wind or fire.

The growth in Pittsburg is very largely spruce, with a few isolated pine tracts, heavy hard wood on the uplands in some quarters, and with cedar in the lowlands around the lakes.

Being for years under single and intelligent control, this solid body of timber has been farmed with unusual sagacity and profit. No pulp wood is cut, and only matured trees or trees of reasonable diameter are logged. Of course, there are the inevitable exceptions of abrupt hillsides, which are practically cleared when reached, and which thereafter can only produce bushes and deciduous trees—which, however, prevent erosion.

From the First lake, after passing perhaps two miles of upland farms, the “tote road” plunges into primeval forest, ending at “Idlewild” or “Camp Chester” on the Second lake, a total distance of eight miles, largely built by state appropriations. From here we look east across the lake to the great bulk of Camel’s Rump, rising 3,711 feet into clear air.

The Third lake is five miles to the northeast, near the national boundary, accessible only by a trail and the winter roads of the loggers. No clearings break this great expanse, in which moose, deer, bear, and smaller game abound, the waters being filled with fish. There have been here no serious forest fires. The commission is assured that the lay-out of each year is planned with the intent to cut only matured spots, developing the residue for later crops. It seems to us that this, our largest forest, is as well conserved and managed as could be expected, unless under critical state ownership and supervision as a reservation for public purposes.

DIXVILLE NOTCH.

Returned to Colebrook, a thriving and beautiful town, the half-shire of Coös county, we strike southeast for Dixville Notch—the gorge in the Dixville chain of mountains, where,

at its western extreme, The Balsams, developed by skill, artistic taste and plenty of money, invites the tourist to the most delightful spot in the extreme northern section of the mountain region. This gorge is a stupendous work of nature. Rent through trap rock that towers at the crest of the pass eight hundred feet above the roadway to Table Rock, it has all the accessories of a mountain "notch." The Flume is equal to that at Franconia, the Cascade rivals that of the Crawford Notch, while it has a "Great Stone Face" on its southern wall that divides with its familiars the admiration once wholly awarded to the "Old Man of the Mountain."

In the crescent of the mountains at the western extremity stands The Balsams, an extensive modern summer hotel, perfect in all its appointments. The old rough road through the gorge has been deflected and carried up the mountain side. A brook has been dammed so that a lake of thirty acres now fills the valley in front of the house. The road east of the crest, through state appropriations and local expenditure, has been carried down the incline at an easy grade, held up by heavy masonry, and well macadamized. The house, with its surroundings, is a very gem in the wilderness.

So full reference is made to this unique spot to emphasize what intelligent treatment may accomplish in preserving scenic forest conditions about pleasure resorts. In commendable contrast to the policy of some owners in the southern section of the mountain region, who allowed to be cleared timber lands which they owned in their immediate vicinity, and who have permitted to be sold other tracts that they could have procured and preserved at reasonable sums, with the result that parties whose only quest was money have wrought the inevitable desolation of indiscriminate clearing, including subsequent debris, slash and fires—in commendable contrast to this policy, we say, the owners at Dixville have purchased the entire forest area covering the western slope of the converging mountains and in sight from the hotel, thus thoroughly guarding against possible forest devastation or fire, and preserving intact the scenic beauty of the surroundings.

It is suggested that if this reasonable and simple policy had been observed elsewhere, much of the righteous indignation expended upon unæsthetic lumber operators could easily have been avoided. The example may be followed in the future in other sections with profit.

From the Notch, ten miles further southeast brings us to the Androscoggin, at Errol. We pass through Dixville and Millsfield, practically forest townships, unsettled save along the highway. These townships are still covered with timber, but the woods are largely exhausted from cuttings made by individual owners without that system essential to preservation or continued crops; the mountain sides are, however, covered with foliage, and nothing indicates disintegration or denudation.

Errol slopes to the river, and its farms along Clear stream are as well cultivated and thrifty as are those of the lower Connecticut valley, while clearings along the hill road have developed into rich upland holdings. Much of the forest in Errol is still under control of the E. S. Coe estate, having extensive holdings in Maine and New Hampshire. There are no abnormal conditions visible in the Errol woods. Parties have cut or "permitted" as seemed best to them, and, while waste has largely resulted, better counsel seems to prevail and a future crop, to be secured by careful management, is now an element in the calculations of every landowner. There is yet considerable pine in this town, although the general character of the growth is that of the more northern forests—spruce. Much of the timber land yet uncut is held for a rise in price. Consequent upon prevailing high prices, lands are more carefully cut and more *humanly* treated.

ALONG THE EASTERN BOUNDARY.

To penetrate the forests of the north on the eastern boundary of the state, we pass over a fairly good road largely aided by public appropriations, from Errol Bridge one mile to Errol Dam, the great structure across the Androscoggin that

holds the river in check, lifts the waters of Umbagog Lake, and sets back Magalloway and its tributaries as far as "Brown's Farm" and College Grant. Next above Errol is Wentworth's Location, owned largely by the Coe estate — mostly a wilderness, a few fertile farms along the Magalloway alone evidencing the thrift of this region, affording quick, certain and profitable market for farm produce necessary to equip the camps with supplies. Mr. Coe was regarded as a wise and conservative manager of forest areas. Since his death it is evident lax methods have to some degree succeeded. The worst evidence of injurious and wasteful cutting observable in all this trip was near the settlements and along the river on the Coe lands in Wentworth's Location, where the taking of poplar for pulp wood had been "permitted."

"Brown's Farm," so named as the woodsmen's headquarters of the Berlin Mills Company, of which William W. Brown, the veteran lumber operator, and his sons are the chief if not sole owners, is situated on the Maine side of the river just opposite the post-office at Wentworth's Location, and about a mile above the farm known in the earlier days of the settlement as "Durkee's" — Ziba F. Durkee, an emigrant from Hanover, who returned there late in life, being at that time the general factotum of the settlement, representative in the legislature, justice, postmaster, and holder of all town offices. In those days it was the Peter Bennett farm; now while only a farmhouse, it has stabling for scores of horses, and halls for victualling and sleeping of a hundred woodsmen, or even more. The heavy wagons depart from here to ford the Diamond and crawl up the blind trails called roads, to the camps on Dead or Swift Diamond streams, or to drag up the Magalloway to the steamboat landing at the head of Escobos falls, whence bateaux and teams take the freight to Parmachenee, Little Boys falls, and the depots through the wilderness. The Berlin Mills Company own great areas and, as will be noted later, their business is conducted with intelligence, expensive system, and notable results.

A WILDERNESS ROMANCE.

From "Brown's Farm" we pass a mile up the river, crossing the Magalloway—there twenty feet in depth—by a ferry, the only route affording access to College Grant and the lands beyond for the months when the waters of the Diamond are out from melting snows. The Diamond enters the Magalloway at the base of Mount Dustin near this point. One and one fourth miles up it receives the Swift Diamond from the east, which heads at the Diamond ponds in Stewartstown and Colebrook. At this point, too, is an ancient farm, ancient for this region, the Robbins' farm, occupied early in the last century by a trapper of that name, who murdered in the woods for his peltries, one Hines, a fellow hunter, and his son, and whose capture by Gen. Lewis Loomis and Hezekiah Parsons, of Colebrook, incarceration in Lancaster jail and escape therefrom, is one of the romances of the early days in this county. This farm and the tragedy are the foundation of the novel "Gaut Gurley," by D. P. Thompson, a former novelist of repute, author of the "Green Mountain Boys."

Just in rear of the house on the farm we again pass beyond civilization and continue, stopping at the clearing four miles above known as "Van Dyke Farm," where was and is an extensive lumber camp. From here the semblance of a road continues six miles further to "Hell-gate" Camp on the Dead Diamond, where is the most original, retired and successful fishing and sporting camp in the northern wilderness. This tract, College Grant—officially known as the "Second Grant to Dartmouth College"—a tract of seven and one half miles by five miles, has been the subject of strenuous litigation. Owned by the college, the taking of timber thereon for a term of years was permitted under restricted conditions. This contract was let and sub-let, and suit is now pending brought by the college for alleged wasteful and excessive cuttings thereon. Counsel is engaged on either hand, the amount involved is large, and the result awaited with anxiety (October, 1902).

Examining this region quite thoroughly, we returned to "Brown's Farm" and proceeded six miles up the Magalloway along Half Moon mountain on the east of the river, past Mount Escobos on our right, to Wilson's Mills, the most northerly clearing, across a spur of Escobos, two miles further to the steamboat landing at the head of the falls before referred to. This valley, perhaps eight miles in length and one mile in width, lying on both sides of the river, when first known to the president of the board held a few occasional houses surrounded by woods. Wilson's Mills still clings to the faith of Capt. John M. Wilson, its proprietor in the days of the land speculation in the thirties, that it was to be a station on an international highway from Quebec to Portland, but the outlook was not encouraging. To-day it is a cleared rich farming territory, the river spanned by three covered bridges, fine houses, a good hotel, a church dotting the landscape, occupied by a prosperous and contented people. The president of the board had the pleasure of meeting here two of his old employees on the survey of the state line in 1858—Nahum W. Bennett and Lorenzo Linnell.

METHODS OF THE BERLIN MILLS CO.

Returned to Errol Dam, we passed down the comparatively new road twenty-five miles to Berlin, of which thirteen miles—from Errol to John Chandler's, "the only second class hotel in the United States," at Dummer—is unbroken forest. We have referred to forest conditions in Errol through which several miles of this road are built, thence we pass through a corner of Cambridge into Dummer. From Chandler's tavern, twelve miles to Berlin, the land is alluvial along the river and occupied by cultivated farms. We pass Pontooncook falls along miles of river filled with piers, booms and timber of the upper lake region, through Milan to the phenomenal city of Berlin with its stupendous lumber, pulp and paper mills and its ten thousand inhabitants.

Here we were shown through the mills of the Berlin Mills Company and made somewhat familiar with their woods work. Colored maps of each township, with raised maps showing contour and streams, form a part of their data. This company, owning very largely in Maine and extensively in New Hampshire, controls its own land and declares its intention to cut conservatively and to keep up the lands for future cuttings. They have an educated and trained forester, Mr. Austin Carey, familiar with continental methods and with the varying shades of American lumbering. His published paper upon forest conditions in New Hampshire, given to the press last year, seems to be one of the most sensible, practical and excellent brief treatises yet made public on lumbering and scenic conditions. It is devoid of sentiment and hyperbole, hence distinctly valuable. In the north woods the Berlin Mills Company does not cut or "permit" pulp timber, as such. It is connected with the Burgess sulphite pulp works, and its waste, defective timber, butts, rifted or unavoidable smaller sticks that come in with the drive, are turned over for pulp.

In a general way we may say that the three great lumber concerns of the North Country — The VanDykes, the Coe estate, the Berlin Mills Company — are all sensible of the value of forest development and preservation and are conducting their work accordingly.

At Berlin our route joins the northern terminus of our earlier trip, thus covering the state from Conway on the south to the Canadian boundary on the north.

THE JEFFERSON NOTCH ROAD.

In November following, on invitation of Governor Jordan, the president of the commission accompanied him on an inspection of a section of the state road to lead from the Crawford House near the White Mountain Notch along the western slope of the Presidential Range, to the E. A. Crawford House at the lower extremity of Jefferson Highlands, near

the Randolph line (that part of Jefferson formerly the leg or extension of Kilkenny), southward to Low and Burbank's Grant. The building of this road was let in two sections, the southern part from the Crawford House north to the carriage road leading up to the base of Mount Washington being one part, about four miles, the other continuing to Jefferson, about ten miles, not then completed. The governor, Messrs. Barron and Merrill of the Fabyan and Crawford Houses, Mr. Anderson of the Mount Pleasant House, the contractors, and several old-time stage drivers being also of the party.

This section of the road itself was excellently well constructed. The first trip over it, being made by our party in a mountain wagon drawn by six horses, was easily accomplished in thirty-five minutes. Much credit is due to the proprietors of the contiguous hotels and the engineer for the success of location. Instead of striking from point to point in the most direct course, the road is led along hillsides, around salient points and by streams, that afford great variety, opening charming vistas toward the Fabyan on the north and the Crawford Notch. Its completion to Jefferson will afford equally attractive situations. There can be no doubt that its construction will be of great convenience as a means of communication between summer resorts, prove a delightful forest drive, add greatly to the attractiveness of the region and to the business at Jefferson and near the Notch, and of course further augment the revenue of the state and all concerned in the important interests so promoted.

The northern and eastern end of this line follows essentially the course laid out for the "Waumbek Road," projected by a corporation established in 1868, for which no public aid could be secured and which languished for lack of private capital with which to construct it. It is a delightful route through deep forests all the way to its junction to the southern half described, and as a whole is a work from which the state as well as individuals must derive much benefit.

BAD FOREST CONDITIONS.

Incidental to this trip was a renewed observation of the forest through which the road passes. It will appear later that by great misfortune the most inopportune destruction of the mountain forest by axe and by fire has been in the most conspicuous places. There could be no places selected more open to public observation and criticism than along the western slope of the Presidential Range, from Fabyans to the Notch, along the Franconia Notch road, along the Peabody river and the vicinity of Glen Ellis falls. It is these areas, an infinitesimal percentage of our entire area, that have experienced the worst treatment, giving occasion for much of the criticism and alarm that have pervaded the public mind.

As is too well known the original timber tracts along the Ammonoosuc and from Fabyans to Crawfords have been very thoroughly denuded of their valuable growth, some sections having even been stripped for charcoal kilns. In the last named section, after the axe had done its work, fire alleged to have been communicated from locomotives followed through the slash so that desolation was as nearly perfect as the most nervous alarmist could desire, furnishing object lessons of deplorable and vivid degree. Through this devastated section from the Ammonoosuc to Crawfords this carriage road is led. It is gratifying to note with what zeal and success nature is supplying new growth and repairing the desolation of axe and fire.

While stately primeval trees are gone, save gaunt and bleached trunks occasionally standing, a new growth covers the land and the inexperienced eye fails to note the absence of original trees. The bleached trunks referred to are gradually falling before decay and the prevailing winds, to be hidden by the young vegetation, so that happily the time is not far distant when the great blemish of devastated forest, for years offending the eye and public taste, will disappear, accompanied by conditions that will prevent repetition of misuse; but this generation will not see its commercial value restored.

This area is further protected by the wise action of the hotel proprietors. The owners of the Crawford House hold large tracts, bought to control forest cutting. The elegant and capacious Mount Washington Hotel, recently completed by the Mount Pleasant Hotel Co., and owned by Mr. Joseph Stickney, of New York, a son of Concord, is also safeguarded as to its scenic surroundings by the purchase of large tracts of land including Crawford's Purchase upon the mountain slopes and in the valley adjacent, a wise policy adopted and referred to in the case of The Balsams at Dixville Notch.

AMERICAN FORESTRY ASSOCIATION.

In December the president and secretary of the board attended the annual meeting of the American Forestry Association at Washington. This society, formed for the propagation of information and instruction as to forestry conditions throughout the country, is composed of men skilled in the lore of woodcraft as practised by Continental governments and as the result of intelligent forest culture, to whom are added amateur foresters and volunteers who are interested in the work. The secretary of agriculture is its president, and it numbers among its members the professors of forestry in the greater colleges of the country, state boards of forestry, and such eminent savants as Mr. Gifford Pinchot, whose culture and experience in practical forestry, exemplified in the Adirondacks and at Biltmore—the Vanderbilt estate in North Carolina—entitle him to rank as recognized authority in his chosen profession. This society meets annually at the capital and is well attended from all sections of the Union, thus gathering information from delegates and its own corps of officers, and disseminating information of uniform and valuable character.

The business meeting of the American Forestry Association at Washington, in December of last year, was holden at the New Willard, where the programme of the day was discussed, followed by a lunch at which interesting concise addresses were made on practical topics, commencing with that of the secretary of agriculture and continuing with eminent experts from North, South and the extreme West.

PROPOSED APPALACHIAN PARK.

An interesting presentation of the plan for congressional establishment of the proposed Appalachian park, concerning which so much has recently been said and written in and out of congress, was made by Dr. W. J. McGee, of the bureau of ethnology. This project took form in a bill introduced the same month, which has passed the senate, and which provides for the purchase of some 4,000,000 acres at a cost of \$10,000,000; and the *Springfield Republican*, reviewing the project at some length, expresses the opinion that it is not too much, either in area or in dollars, for the purpose desired. It will secure a preserve about one hundred and fifty miles in longest measure, and of various breadths, from four thousand to six thousand feet above the sea, running through the states of Virginia, West Virginia, North Carolina and South Carolina, Alabama and Tennessee. In this mountain region are the springs of the James, the Roanoke, the Catawba, the Savannah, the Kanawha, the Tennessee, the French Broad, and many other important streams of the South which water the states named and also others in their further course.

Much stress was laid upon the alleged necessity of preserving this section as the source of the rivers named, whose flow and power as well as agricultural attributes were imperilled by wasteful cuttings and actual erosion of hillsides, preventing reforestation. It was evident that this scheme had a powerful united support, backed by a number of states in the central South, and that, aside from its declared and apparent merits, it was so presented as to be likely to meet ultimate success.

Since this park has reached greater notice through action of congress, its merits have of course been the subject of newspaper and public discussion and criticism. Suggestions have been made that our own delegation essay to transfer the appropriation and location to the White Mountain region of our own state, on the ground of its greater attractiveness to tourists and its greater publicity.

We have not considered such a plan likely of success if attempted. The Appalachian park is demanded for other than scenic reasons, as stated, and has, as also stated, the united local support of a number of powerful states. It occurs to us that its success is desirable, and that it may prove a precedent for the later establishment of a national park in our own forest and mountain region, of great benefit to the state and to scenic, tourist, railway, agricultural and manufacturing interests. Further allusion to this subject of a national park within our own border may be found elsewhere in this report.

At the close of the business meeting Professor Pinchot invited the delegates to a reception at his own home the same evening. This gathering was largely attended, and proved to be of great interest and value. The spacious library had been fitted for the occasion, and with screen and lantern slides, several hours were spent by different gentlemen in displaying forest conditions, denudation, erosion, lumbering, tree culture and growth in all sections of the country, from excellent photographic views, accompanied by statistics and figures. Indeed, the evening embraced an illustrated lecture on forestry by the highest and most accomplished experts and teachers in the field.

Later an arrangement was made by the New Hampshire representatives with Professor Pinchot that he would in the near future apply to a tract of Corbin park, in Sullivan county, assigned for this important purpose through the efforts of Senator William E. Chandler, the methods of approved scientific forestry. We regard this concession as of great importance as affording our people an object lesson as to what is practised and accomplished by these methods. Mr. Pinchot having been sent to observe forest conditions in the Philippines, this work has necessarily been delayed; but the subject was presented to President Roosevelt during his recent visit to New Hampshire and to Corbin park itself, and the commission has personal assurance of his continued interest in the work.

The day following, through an interview arranged by Senator Chandler, whose deep interest in forest culture and preservation is well known, and accompanied by him we visited the White House and enjoyed a very satisfactory and encouraging interview with President Roosevelt. Stating our mission and connection with the work in hand, the President was much interested, particularly in the scenic beauties of our forest and mountain region and the relation of forest preservation to the material prosperity of New England and the country at large, evincing familiarity with the subject which he declared interested him greatly.

This trip we conceive to have been of considerable importance as putting the New Hampshire commission in touch with the national association, the gathering of new and practical ideas, obtaining the concession from Professor Pinchot relative to Corbin park, and the very satisfactory interview with President Roosevelt.

THE PEMIGEWASSET FOREST.

In June of the present year the commission passed over and through the Pemigewasset valley, embracing Campton, Woodstock, Lincoln, and along the highway from the Profile house to North Woodstock, the terminus of public traffic on the railway. The familiarity of the tourist public with this region, the importance of the hotels at the Profile, the Flume and Deer Park, with the summer colonies scattered through the valley, lend great interest to this section aside from the magnitude and character of the lumbering operations, past and in progress.

We examined quite thoroughly the extensive mills, both for cutting lumber and the manufacture of pulp, of J. E. Henry & Sons, at Lincoln, two miles above the terminus at North Woodstock, looked over the size and character of round timber in the storage pond and on the trains coming out from the camps eight and ten miles further north, being unable from restriction of time to accept the invitation of the firm to remain another day and go with the lumber trains up the Hancock Branch, ten miles northeast to the terminus.

Henry & Sons are one of the great lumber and milling establishments of the state, ranking with the Connecticut Valley Lumber Company, the Berlin Mills Company and the White Mountain Paper Company. Henry & Sons own over 100,000 acres of contiguous forest and manufacture over 125,000,000 feet of round timber into dimension stuff and pulp annually. They have a ground-pulp mill at Livermore Falls, near Plymouth, and a double-side sawmill with chemical-pulp mill at their village of Lincoln in the corner of that forest town.

It was the senior of the firm who operated along the Ammonoosuc and along the western base of the Presidential Range, as before referred to. It is about ten miles from the present terminus of their forest road to their former mills at Zealand, and in due time they expect to pass through the valleys to that point.

The work of this firm along the mountainsides by the Pemigewasset is visible, but time has partially covered the lands with new growth so as to promise to remove the rough traces of the lumberman. There are other firms still operating along this valley, and still others whose works, closed or abandoned, with their debris are largely noticeable along this once charming stage-coach drive through the Franconia Notch. As may appear in later comments and conclusions the worst seems to have happened to scenic conditions, while nature, the restorer, is busy to reproduce a new cover to the landscape.

The Henrys, like the other great firms alluded to, admit the wisdom of careful cuttings for future crops, but do not always practice the wisdom they assent to. We understand the *theory* to be to cut only the matured timber, leaving the smaller growth for a future crop or crops for the pulp mills. As with other locations and firms, this intention must be received with generous allowance, consequent upon cutting high slopes difficult of access, cutting around expensive roads bushed out and laid over bad places, tracts likely to be affected by winds when once thinned, and other causes familiar to woodsmen—a general reservation common to all lumbermen.

Passing down the railway to Meredith we drove to Centre Harbor, along the shores of Lake Winnipiseogee, through Centre Harbor, Moultonborough, Tuftonborough, noting the prevalent summer boarding-house and ever present arrangement for summer guests, to the northeast towards Chocorua, and Ossipee Park. The carriage road up the mountain and the buildings erected in the forest at high altitudes emphasize the impetus of this extensive and growing business.

SUCCESSFUL REFORESTATION.

Our especial object was to examine under natural conditions an attempt at reforestation by the planting of seedling pines over quite an area on the north shore of the lake in Moultonborough. In 1878 Hon. Isaac Adams, then of Sandwich, having carefully prepared a tract of forty acres of arable land, once a productive farm, caused it to be planted with seedling pines. These were set in parallel rows four feet apart so that, looking either way, the rows of trees "crossed each other like lines on a chess board," as the Malte Bruns geography of our childhood declared of the streets of Philadelphia. Thus the trees were four feet apart each way; none of them were over six inches high when transplanted. The contract gave one cent each for digging and replanting these trees, payable, as a measure of caution, only for such of them as were alive the succeeding year.

During the twenty-four years that have elapsed nothing in the way of trimming or culture has been done to this grove. Few of the original trees died and they have attained an average height of twenty feet with a diameter of from three to eight inches. Cutting of surplus trees is much needed, perhaps a distance of eight feet is now required for healthy development; but enough has been shown in this stand to demonstrate what may be accomplished by tree planting and intelligent culture of pines. Another grove belonging to the same owner and transplanted under like conditions shows like results.

THE ELWYN WOODS.

As an object lesson the "Elwyn Woods" in Rye and near the coast affords the finest example in New England of primeval forest. This is a growth of stately pines, standing without admixture of other trees for a part of its area; grand oaks, perfect in outline and verdure, covering another space; with a mixture of equally stately oaks and pines filling the third part of the large area. This forest, of great commercial value and so dear to æsthetic taste as to make it a pleasure drive and show place for the guests of this region, shows of what the state has been deprived by unwise, indiscriminate cutting and what is possible of attainment under an intelligent system of replanting for reforestation.

On the farm of Capt. Alexander M. Beattie at Lancaster, the other extreme of the state, is a pine growth of most encouraging character, reaching along the Connecticut river near the crossing into Vermont of the Maine Central railroad. When Captain Beattie bought the premises, in 1866, this was but a native growth of seedlings and saplings. It has been protected and received constant although not critical care. To day it is an open reach of straight, clean, thrifty trees, a foot to two feet in diameter, fit for the market in a commercial sense, demonstrating again how good an investment is a judicious replanting of pines on available and comparatively worthless lands.

NATURAL REPRODUCTION.

In passing over the state we are struck by the recurring and ever present evidence as to natural facilities and accessories for tree reproduction. On the hillsides, the sites of former wood lots, the sterile pastures, the moist banks of the streams, trees coniferous or deciduous can be set at little expense, which in a few years will greatly add to the scenic beauty by their verdure, and to the commercial value of the farm.

Nature works silently and surely. "When you've naught to do, stick in a tree, Jock; 'twill aye grow while you're sleepin,'" said the laird of Dumbedikes to his hopeful progeny. It is advice that may well be taken by our own people.

It is believed that some encouragement by the state, like relieving from taxation something on each farm or holding where replanting had been successfully followed, to be evidenced by a return made to the selectmen yearly, when taking the inventory, all this without noticeable waste of time or increase of labor and absolutely without expense to the public treasury, would in a brief time exhibit most surprising and gratifying results.

THE DEMAND FOR PULP WOOD.

It is proper to note that the requirements of the pulp mills make a demand upon our forest product that is not fully comprehended. It is relative to this large demand that so great apprehension exists. While conservative companies may essay conservative methods in cutting, there is likely to be little restraint upon the jobber, or in too many instances the landowner, who, for the money there is in it, generally cuts all "in sight." The cutting of pulp timber is not confined to the forests alone, but any farm having upon it a stand of a few acres is likely to be denuded, as the wood finds ready sale at the near-by pulp mill, the railway siding or the landing on the nearest water course that will float it. It is here, if anywhere that the power of the state must be exerted in a comprehensive manner to protect alike the immature growth of the forests and groves of small area all over the state.

At Berlin, in the autumn of 1901, we met Mr. Curtis, superintendent of the woodlands department of the International Paper Company and supervisor of its forest work. With him the subject was thoroughly discussed and by him we were assured that it was and would continue to be the policy of his company to cut only trees of certain dimensions, leaving clean work and the smaller product for reproduction and subsequent cuttings.

Much interest is felt as to the policy to be pursued by the White Mountain Paper Company, purchasers of great areas of land (although greatly exaggerated by current report) along our eastern border in Carroll county and adjacent, and builders of very extensive pulp mills at Freeman's Point near Portsmouth. Discussing this matter of supply and reproduction, while in the city just named, with the representatives of the plant, we were also assured that, alive to their interests, their land would not be desolated, but cut for future growth and subsequent crops. If this policy is pursued it will greatly relieve public anxiety and demonstrate the wisdom of the promoters of this industry.

THE JEFFERSON NOTCH ROAD.

September 9 of the present year the president of the board, by invitation of the governor, accompanied him and his executive council over the forest highway, heretofore alluded to, from E. A. Crawford's, in Jefferson, to Twin rivers, there connecting with the southern end of the same line, constructed and inspected in 1901, to the gate of the Crawford Notch, the entire fourteen miles being the state highway joining the two extremes named along the western slope of the Presidential Range, authorized by the legislature of 1901 and made possible by generous and intelligent contributions of landowners, hotel proprietors and cottagers to raise the full sum necessary for the completion of the work.

This enterprise, costing about \$10,000, must be of great and increasing value to the state, in that it opens up a route at once convenient for public traffic and a delightful drive for tourists, besides connecting in a community of intercourse and interest the great hostelrys, such as the Mount Washington, Mount Pleasant, Crawfords and Fabyans and the rest, with the Waumbek and hotels in Jefferson and Randolph, with the attendant cottages and cottagers, and with the highway to Gorham, the Glen House, and the route through the Pinkham Notch by Glen Ellis falls on the east, to Jackson and Glen Station at the southern end of the notch, thus making a circuit of the mountains and a drive unparalleled in the mountain region for noble views and vistas.

This completed road has been a formidable undertaking, and but for the knowledge of the region possessed by the governor, his wise support of the measure, and the persistent energy of the commissioners, could not have resulted in success. Particular credit is due to Ethan A. Crawford, of this road commission and builder of the northern section, for his indomitable persistence in surmounting the obstacles of the route. The third Ethan and the fourth from old Abel Crawford, the pioneer of the White Mountain Notch, it was peculiarly fitting that he should complete this work and drive over the completed road the first mountain wagon, carrying the governor of the state with his council and official guests.

DESCRIPTION OF THE ROAD.

The road starts from E. A. Crawford's summer hotel at Jefferson Highlands, about 1,300 feet above tide water, dips down to the Siwooganock or Israel's river, following up the south branch to the summit, about 3,100 feet above the sea, thence down to the Twin rivers and across the spurs of the range four miles further to the gate of the Crawford Notch, 1,914 feet above Boston Harbor. The drive over this remarkable route was one to be remembered. The day was wholly fitted for the occasion, the presence of the governor and a distinguished company emphasized the pleasure to all concerned; the grand and inspiring views, the novelty to many of the deep forests, tumbling brooks, rustic bridges, glimpses of castellated mountain ridges and peaks, with gleaming vistas of lowlands and shining waters, were all a part of an enduring picture.

The greeting at the summit by John Anderson with his cavalcade of ladies and gentlemen, the echoes of bugle calls, the reception at the magnificent Mount Washington Hotel, marked an epoch in mountain chronicle and achievement. The commission regards the construction of this road throughout its extent as wise and wholly advantageous to the state, its sponsor, and sure to return abundant practical as well as æsthetic returns upon the investment.

It seems pertinent to remark in connection with the opening of this state highway, that it is the fruition and complete realization of a plan for a road, before referred to, over practically the same route unsuccessfully attempted in 1869. The president of this board, being that year a member of the house, secured the passage of an act to incorporate the "Waumbek Road," extending from the highway in Randolph near the E. A. Crawford House up the south branch and down Jefferson brook to the road running from Fabyan to the base of Mount Washington. In the summer of that year, accompanied by Hon. Nathan R. Perkins, of Jefferson, Dr. John W. Barney, of Lancaster, and Ethan A. Crawford, father of the present builder, and projector of the Crawford House, all deceased, he tramped through the forest, with a pack, camping over night in the woods, on practically the same route that on this occasion the gubernatorial party passed over in an eight-horse wagon, driven by a sturdy son of Ethan, the builder of the present road. The generation intervening emphasizes the growth, magnitude and importance of good roads and forest preservation to the material progress and prosperity of the state.

BLUE MOUNTAIN FOREST.

In October last the commission spent several days at Blue Mountain forest, commonly known as Corbin park, in Sullivan county, making quite full examination of this great private preserve, unique in the state. Reference has been made to this park in connection with the presence of the board at the meeting of the American Forestry Association in Washington, and the proposition that a section of its area be assigned for practical application of scientific forestry methods in tree cutting and culture therein by Professor Pinchot, which work has been delayed, as also stated, by his official duties in the Philippines. This consideration, with others relative to the park, induced the visit.

Ex-Senator Chandler, who has long been a legal adviser of the Corbin estate, the owner of the park, and a director of the corporation, afforded us every facility for a complete

examination of the premises, extending to us in its fullest extent the courtesies of the park, himself accompanying us to points of interest, and explaining the manner, conditions, and methods observed in extensive tree cuttings now going on therein.

It seems to us pertinent to refer to this extensive area and its management, as a matter of interest connected with our work, to the people of the state.

Corbin park covers about twelve miles in a northeast and southwest direction, having an average width of nearly five miles. The central station therein, or club house, is three hundred feet above Concord, or five hundred and fifty-three feet above tide water, the land rising to the crest of Croydon mountain, which lies wholly within the park, two thousand seven hundred and eighty-nine feet above the sea. The total area is nearly twenty-five thousand acres, comprising swamps, low meadow, cleared hillside, forests and rough mountains. About one hundred and fifty farm holdings were purchased by the late Austin Corbin, together with forest and uncultivated areas, when accumulating this great holding. Of this farm aggregate, about one half were already "abandoned" in the fullest sense of the term, the others being in occupancy and cultivation. The average price paid for this land was five dollars per acre, making the purchase aggregate \$125,000.

These conveyances were all voluntary, nor were any public rights, so far as we know, in any way infringed upon by this accumulation. Several natural and artificial ponds exist. Public roads through this area were discontinued, but replaced by others constructed outside by Mr. Corbin, others of them being retained for use and kept in admirable repair. There must be between thirty and forty miles of road maintained inside the lines, supplied at intervals with heavy granite water troughs, enameled sign directions, with suggestions at abrupt changes of level to look well to harness, uncheck horses, etc. This holding is surrounded by a heavy wire fence of eight feet altitude, with a wire mesh six feet high additional, so that, in the language of a former north

country stock raiser, applied to a phenomenal rail fence of his own construction, it is "mule high, pig tight, and bull stout." This fence is pierced by heavy wire gates of convenient pattern, and made safe from trespass by uniform locks. This fence cost about \$100,000, and with the animals and general appurtenances, bring the understood expenditure for the park well up to \$500,000.

Within these boundaries is the largest herd of buffalo, or American bison, in existence, now numbering one hundred and thirty; nearly three hundred black boar of the ferocious Continental strain; herds of elk and deer; twenty moose; with goats and other smaller game. Several years since a lease was made of the premises for five years, with restricted hunting privileges, to an organization known as the "Blue Mountain Forest Game Club." It was here that President Roosevelt was last summer a guest and successful hunter of the boar.

It should be said that this land lies in six towns, but mostly in Croydon, Cornish, Grantham and Plainfield, with smaller holdings in Newport and Claremont. If any part of our state was to be given over for a park of this size, it seems that the site could not be better chosen. While generations of hardy sons of New Hampshire wrung a livelihood from these mountain slopes, and while men of brain and brawn once raised notable families within its present confines, the strife was strenuous, and the voluntary abandonment and willing sale of farms at the nominal price per acre cited, testifies to the willingness of owners to assent to such changed conditions. The park will increase in beauty. Its picturesque mountain ranges, open hillsides, green meadows, and varied contour, give variety and delight to the observer, while its timber product is by no means unimportant.

The northern section of this reservation is quite heavily wooded with a mixed growth, and having a good stand of spruce, in which forest and with which timber it has been decided to apply, as suggested, the art and science of approved scientific forestry, in anticipation of which work

the owners have "permitted" limited restricted cuttings on the southerly slope of the eastern end of the mountain range in the town of Grantham.

A single-side steam sawmill of the daily capacity of twenty-five thousand feet has been erected by the contractor one mile inside the fence at an elevation of one thousand feet above tide water. The timber is drawn from the mountain-side in the rear, fifteen hundred feet above sea level, extending up the slope from a point one mile back from the mill. The growth is straight clear spruce; the trees are first marked for felling, are cut with saws, thus saving stumpage and disfiguring tall stumps; they are "snaked" by oxen to the rough roads, one end loaded on a bob-sled, and drawn by four horses to the landing at the mill, the teams making four turns a day each at this season of the year. No trees are cut less than ten inches in diameter at three feet from the ground, and no destruction of small growth is attendant save necessary cuttings to provide for the safe fall of the tree or for corduroys and bridges, all smaller spruce being left for further growth. The spruce now cut shows from one hundred and fifty to two hundred annular rings, and is the first cutting upon this land. Spruce areas, treated as here described, yield reasonable return for stumpage and lumber without despoiling the woods or preventing the recurrence in due time of equally good timber crops.

As a complete object lesson, both of a game reservation and protected timber area, Corbin park furnishes information essential and valuable to a full understanding of conditions in the state, which is of importance to the commission in presenting its conclusions to the legislature.

From time to time within the period covered by this report, the commission have made other examinations of the secondary forest, with special reference to those sections where cutting has been most active of late, the most frequent inspections being made in central Merrimack county, in the Souhegan valley, and in Cheshire county. These are the sections where the normal product of the secondary forest

has been most extensively exploited, and they are the sections, too, where the character of the forest cover has been most attractive to foreign capital and enterprise.

Forest conditions there, as in the North Country, are not wholly bad; although it must be admitted here, equally with the White Mountain region, that in some instances there has been a wilful disregard of all proper rules for harvesting the timber crop. These conditions, however, are not beyond repair by unaided nature, as the nature of the soil, the topography, and the character of the forest cover all tend to swift natural reproduction. With intelligent direction added to nature's recuperative powers in these sections of the state, remarkable advances in prosperity and wealth are possible, and in another place the board points out certain means to this end.

INTEREST IN NEW HAMPSHIRE FORESTRY.

It is natural that interest should exist in widely different environments relative to the forests of the state and cognate subjects. So many strangers habitually spend the warm season within its borders, so great is the tide of pleasure travel, so heavy is the investment in hotels, boarding-houses and appliances, so large is the income derived by our railroads from passenger and freight traffic connected therewith, and so desirable is the market afforded for agricultural products and labor by this branch of enterprise, that all statements concerning our forest conditions are read with avidity and no doubt materially affect the revenue from this prolific source of income.

We conceive it to be the province and duty of this commission to lay before the legislature, as fully as possible with the means at its command, facts as they exist relative to this important matter. It seems to us our duty to have in mind *all* interests connected with the forest, wherein the labor and money of our people are invested. No *one* interest deserves undivided attention or encouragement — *all* should have the wise protection of the state.

We assume that the state does not intend to take ownership or suzerainty of any extended portion of its forest area, and that practical forestry, as it must at present exist and develop, lies along the lines of educating landowners (and restricting them in rare instances) to the wise cutting of matured trees, so that while operations return proper remuneration to owner and operator, the scenic beauty of our forest areas shall not be marred, the growth denuded or erosion ensue, or diminution of rainfall and the mechanical power of our streams, or climatic changes become possible.

Without doubt much has been hastily and crudely written, to be caught up, circulated and commented upon by newspapers, magazines, and correspondents, that has greatly exaggerated existing conditions relative to timber and pulp cutting; and it is a serious question if this indiscriminate criticism, or alleged *information*, may not have worked and continue to work undeserved and serious injury to all our people engaged in ministering to summer tourists and boarders, through presenting so shocking a picture from the eye of fancy as to deter travel and deplete income.

DAINGEROUS HYSTERICS.

The importance of summer travel, as it is generally indicated, in our state is beyond doubt very great in building up our income. Here, however, as elsewhere, exaggeration is busy among the informants and sources heretofore referred to. It is a common expression among outside papers, not at all encouraging to our state reliance or pride, that "without the summer guests the state would have to go into insolvency"; "that the only future for New Hampshire rests in attracting and retaining summer boarders;" that the widespread destruction of our forests is despoiling the landscape and changing mountain views, is drying up the streams and producing erosions, is breaking the graceful contour of our mountain sides and rendering less attractive the once grand features of our scenery. Nothing could be further from the exact truth than these hysteric statements. In their place we

shall consider other matters here enumerated, but in this connection we present statistics drawn from the report of our State Commission of Labor and from the tables of the last United States census to show the amount of money and labor invested and the annual return received from *several* of the local industries of the state, of which the summer tourist interest is *among* the most important, although by no means the *most* important, as accompanying figures will indicate.

VOLUME OF SUMMER BUSINESS.

While two seasons have intervened between this writing and the time of compilation, it is believed that the variation in ratio between summer and other industries has not materially changed.

We gather these general statistics :

Capital invested in summer property.....	\$10,442,352.00
Cash income from this business, from all sources.....	6,609,364.70
Total wages paid.....	539,901.00
Total number of help employed.	12,354
Total number of guests and in cottages.....	174,280

There are two hundred and four towns and cities in the state where guests are taken, and thirty-one towns where guests are not taken, or from which no returns were received. Of the receipts, the different transportation routes had approximately as follows :

Railroads.....	\$600,000.00
Stage drivers.....	63,275.50
Steamboat fares.....	60,369.21
Total.....	<u>\$723,644.71</u>

VOLUME OF FOREST INDUSTRIES.

We secure from the twelfth United States census the following figures relative to the forest industries of the state—covering lumber, wood-pulp and paper products—which show that the state would hardly be “poverty stricken,” as alleged by ignorant and unwise alarmists, even without its important revenue from summer business :

Number of lumber and wood-working establishments,	582
Amount of capital invested therein,	\$19,545,195.00
Value of annual product,	16,423,043.00
Total increased value of product during last decade,	9,499,576.00
Number of employees,	6,579

While these figures of a single industry largely exceed the figures pertaining to the summer business, figures of the aggregated manufacturing industries in the state are :

Capital invested,	\$100,929,661.00
Annual products,	118,669,308.00
Wages paid,	27,620,247.00

These figures demonstrate that while the summer business is of great and increasing importance, deserving wise encouragement and stimulation, it does not dominate all the rest or even equal in capital, labor, product or number of employees the lumber interest in our woods, which we believe is placing itself on a more conservative basis relative to tree culture and preservation, a condition that has been reached largely through the constant efforts of this commission, and which to continue and improve will require continual care and intelligent attention.

SPECIAL CENSUS STATISTICS.

In continuation of this topic we submit the following detailed tabulations relating to the allied forest industries of the state. These figures are specially furnished to us through the courtesy of the Hon. William R. Merriam, director of the twelfth census of the United States, and have never been published before :

TABLE No. 1.—LUMBER PLANING-MILL PRODUCTS.—

Lumber planing-mill products,

COUNTIES.	No. of establishments.	CAPITAL.					Proprietors and firm members.	Salaried employees.		AVERAGE ERS AND	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		No.	Salaries.	Total.	
										Average No.	Wages.
Belknap	2	\$25,000	\$200	\$3,800	\$7,000	\$14,000	6	.....	.....	30	\$15,294
Carroll	4	21,700	2,400	2,400	4,800	12,100	6	.....	.....	6	1,575
Cheshire	6	80,900	2,800	6,800	17,500	53,800	4	4	\$2,450	56	28,160
Coos	3	24,125	8,500	4,800	6,300	12,175	4	.....	.....	16	7,000
Grafton	10	82,749	8,300	16,850	19,916	30,033	13	2	1,042	66	24,199
Hillsborough.	13	641,639	80,675	120,219	113,573	327,172	12	23	17,782	483	200,394
Merrimack ..	5	52,050	2,900	8,700	14,300	26,150	6	4	2,050	58	20,595
Rockingham.	4	72,188	750	12,925	18,700	39,813	5	4	2,340	43	18,500
Strafford	5	127,210	2,300	15,900	28,994	80,016	5	12	7,022	111	56,864
Sullivan	5	14,640	2,900	3,800	4,600	3,340	6	.....	.....	2	975
State total..	57	\$1,142,201	\$111,725	\$196,194	\$235,683	\$598,599	70	49	\$32,686	871	\$373,556

DETAILED STATISTICS, NEW HAMPSHIRE, BY COUNTIES.

including sash, doors and blinds.

NUMBER OF WAGE-EARN- TOTAL WAGES.				MISCELLANEOUS EXPENSES.				COST OF MATERIALS USED.			Products including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Total.	Rent of works.	Taxes not in- cluding in- terial reve- nue.	Rent of offices, interest, etc.	Total.	Principal ma- terials, in- cluding mill supplies and freight.	Fuel, includ- ing rent of pow- er and heat.	
Aver- ge No.	Wages.	Aver- ge No.	Wages.								
30	\$15,294			\$2,693	\$560	\$225	\$1,908	\$23,260	\$22,350	\$910	\$50,000
6	1,575			160		114	46	6,858	6,608	250	10,260
56	28,160			6,609	1,867	490	4,252	135,054	134,435	619	181,680
16	7,000			1,532		157	1,375	11,975	11,975		26,000
66	24,199			1,666	75	570	1,021	34,391	33,150	1,241	87,321
483	200,394			42,403	3,150	5,983	33,270	475,810	474,660	1,150	807,003
58	20,595			1,897	140	277	1,480	35,320	34,645	675	70,650
29	13,800	14	\$4,700	3,559	35	279	3,245	46,143	45,593	550	77,388
110	56,500	1	364	4,775	1,440	552	2,783	149,325	148,925	400	268,730
2	975			585	40	97	448	6,451	6,451		11,478
856	\$368,492	15	\$5,064	\$65,879	\$7,307	\$8,744	\$49,828	\$924,587	\$918,792	\$5,795	\$1,590,510

TABLE No. 2.— LUMBER AND TIMBER PRODUCTS.— DETAILED STATISTICS, NEW HAMPSHIRE, BY COUNTIES.

Establishments and capital.

COUNTIES.	ESTABLISHMENTS, KIND, AND CHARACTER OF ORGANIZATION.										CAPITAL.									
											LUMBER AND SAW MILLS.									
											LOGGING PLANT (CONDUCTED BY MILLING ESTABLISHMENT).									
	Total.	Saw mills.	Tie and timber camps.	Total number of establishments.	Individual.	Firm and limited partnership.	Incorporated company.	Aggregate.	Total.	Timbered land tributary to mill.	Other land timbered.	All other land.	Tools, implements, live stock, etc.	Railway and equipment.	Canals or chutes for transporta- tion of logs.	River improve- ments (exclusive of stock in char- tered boom com- panies).	Booms, chains, and supplies.			
Belknap	29	28	1	29	18	9	2	\$370,645	\$369,145	\$98,710	\$24,700	\$53,700	\$2,000	\$9,910	\$100	\$500	\$100			
Carroll	45	44	1	45	36	8	1	589,870	587,020	299,185	89,750	179,100	5,500	16,700	2,200	85,000	210			
Cheshire	61	61	1	61	47	11	3	678,362	678,962	290,820	115,650	9,900	12,325	31,990	...	...	685	
Cook	41	37	4	41	20	14	7	4,195,656	3,632,692	1,759,950	1,298,925	133,700	35,000	123,100	61,000	...	36,725			
Grafton	89	85	4	89	63	20	6	2,813,393	2,714,293	1,524,105	1,168,590	83,150	13,900	91,065	123,000	...	2,000			
Hillsborough	81	73	8	81	60	21	1	861,939	788,604	201,973	108,650	38,250	15,550	29,623	1,200	...	740			
Merrimack	71	71	1	71	52	18	1	589,995	580,995	120,490	55,050	17,900	3,100	29,375	100	...	160			
Rockingham	60	60	60	60	44	13	3	769,655	769,655	272,230	63,080	119,135	27,600	34,255	...	800	...			
Strafford	30	30	30	30	19	10	1	267,173	267,173	46,700	25,975	6,025	600	9,000	...	...	700	
Sullivan	46	46	46	46	35	11	1	253,826	253,826	68,155	33,570	10,100	5,600	15,735	...	...	...
State total ..	553	535	18	553	394	135	24	\$11,382,114	\$10,644,765	\$4,653,318	\$2,953,850	\$650,960	\$121,175	\$331,353	\$195,600	\$1,025	\$36,300	\$41,330		

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE,
BY COUNTIES.—Continued.

CAPITAL.—Continued.									
TIMBER CAMPS.									
COUNTIES.	Aggregate.	PLANT.					LIVE CAPITAL.		
		Total.	Timber land, or standing timber.	Tools and imple- ments, live stock, etc.	Logging railways and equipments.	River improve- ments (exclusive of stock in char- tered boom com- panies).	All other items of investment in plant.	Total.	Value of products on hand.
Belknap.....	\$1,500	\$1,500	\$150	\$1,500	.....	.....	.....	\$2,200	.....
Carroll.....	2,850	650	.....	500	.....	.....	.....	\$2,200	.....
Cheshire.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coos.....	563,554	278,505	112,283	51,754	\$111,168	\$250	\$3,050	285,059	5,786
Grafton.....	99,100	82,500	71,200	10,300	.....	1,000	.....	16,600	6,000
Hillsborough.....	73,335	20,600	13,600	7,000	.....	.....	.....	52,735	43,035
Merrimack.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockingham.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Strafford.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sullivan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State total.....	\$740,349	\$383,755	\$197,233	\$71,054	\$111,168	\$1,250	\$3,050	\$356,594	\$57,621
									\$298,973

Cash on hand, bills
received, un-
settled ledger ac-
counts, and all
sums not in-
cluded in the
foregoing items.

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE,
BY COUNTIES.—Continued.

Persons employed and salaries and wages paid.

PROPRIETORS AND FIRM MEMBERS, SALARIED EMPLOYEES AND WAGE EARNERS, AND SALARIES AND WAGES PAID.																				
SUMMARY.										LOGGING.				LUMBER AND SAW MILLS.						
WAGE EARNERS, INCLUDING PIECE WORKERS.					WAGE EARNERS, INCLUDING PIECE WORKERS.															
PROPRIETORS AND SALARIED EMPLOYEES.		Aggregate.		Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Salaried officials, clerks, etc.		Wage Earners, including piece workers (men, 16 years and over).		PROPRIETORS AND FIRM MEMBERS.						
Number.	Number.	A mount paid.	Greatest number employed at any one time during the year.	Least number employed at any one time during the year.	A verage number.	A mount paid.	A verage number.	A mount paid.	A verage number.	A mount paid.	Number.	A mount paid.	Greatest number employed, etc.	Least number employed, etc.	Average number.	A mount paid.	Number.	Men.	Women.	
35	4	\$3,156	478	242	297	\$109,706	297	\$109,706	123	57	59	\$21,250	35	35	...
53	1	2,000	724	306	258	95,516	253	95,516	184	76	50	19,259	53	53	...
72	14	8,700	797	357	373	139,032	367	137,859	2	4	\$2,100	284	120	102	33,550	72	71	1	...	
56	46	35,745	3,489	1,018	1,935	685,883	1,928	1,975	...	...	...	1,307	360	682	203,516	56	55	2	...
102	39	35,750	2,470	777	1,088	397,831	1,075	395,613	13	11	6,450	415	292	492	154,702	102	100	1	...	
105	11	6,361	1,359	688	782	284,422	774	283,192	1	3	1,070	415	225	258	87,285	105	104	1	...	
90	8	4,400	1,079	348	576	235,352	576	235,352	...	...	...	450	117	189	69,790	90	90	...	...
74	9	2,760	859	465	542	226,414	535	224,804	7	4	910	325	181	211	87,134	74	74	...	...
37	4	2,882	515	205	351	142,052	316	133,772	35	...	...	148	22	86	35,281	37	37	...	...
57	5	3,183	465	209	180	66,816	179	66,616	...	...	...	216	78	65	19,342	57	55	2	...
681	141	\$104,937	12,235	4,605	6,382	\$2,383,074	6,300	\$2,365,418	70	12	\$1,695	4,717	1,528	2,194	\$728,109	681	674	7	...	

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE, BY COUNTIES.—*Continued.*

Persons employed, and salaries and wages paid.—Continued.

[illegible]

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE, BY COUNTIES.—Continued.

Persons employed, and salaries and wages paid.—Continued.

PERSONS EMPLOYED, WAGE EARNERS, INCLUDING PIECE WORKERS.—Continued.

AVERAGE NUMBER EMPLOYED DURING EACH MONTH.—Continued.

COUNTIES.

LUMBER AND SAW MILLS.

Men, 16 years and over.

Women, 16 years and over.

Children, under 16 years.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Belknap.....	241	239	252	276	263	226	170	188	205	198	209	212	99	99	99	99	99	99	99	99	99	99	99	99
Carroll.....	239	226	265	284	196	136	120	147	155	150	170	192	34	23	42	34	23	42	34	23	42	34	23	42
Cheshire.....	319	324	330	310	237	269	167	174	215	241	266	268	8	8	8	8	8	8	8	8	8	8	8	8
Coos.....	792	791	839	887	836	862	772	783	856	836	729	605	8	8	8	8	8	8	8	8	8	8	8	8
Grafton.....	550	589	604	731	635	547	416	457	486	461	472	548	17	18	19	24	19	20	8	7	5	4	14	1
Hillsborough.....	538	600	553	731	499	407	298	282	344	381	403	405	1	2	2	1	1	1	1	1	1	1	1	1
Merrimack.....	456	461	482	499	431	374	234	266	291	343	381	405	7	6	6	6	6	6	6	6	6	6	6	6
Rockingham.....	399	411	401	388	351	325	197	196	260	310	314	333	36	36	35	36	34	33	34	34	36	2	2	2
Strafford.....	254	258	283	287	256	217	85	167	223	231	250	253	94	94	94	94	94	94	94	94	94	94	94	94
Sullivan.....	136	142	151	153	155	108	81	81	83	84	94	102	—	—	—	—	—	—	—	—	—	—	—	—
State total..	3,924	4,044	4,160	4,307	3,922	3,589	2,570	2,730	3,118	3,235	3,288	3,372	81	84	83	87	79	81	58	55	55	56	68	17
													17	17	17	14	10	8	8	6	10	9	10	15

TABLE No. 2.— LUMBER AND TIMBER PRODUCTS.— DETAILED STATISTICS, NEW HAMPSHIRE, BY COUNTIES.— *Continued.*

Persons employed, and salaries and wages paid (Continued)—Animals used.

PERSONS EMPLOYED, WAGE EARNERS, INCLUDING PIECE WORKERS.— <i>Continued.</i> ANIMALS USED.											
AVERAGE NUMBER EMPLOYED DURING EACH MONTH.— <i>Continued.</i>											
TIMBER CAMPS.											
Men, 16 years and over.											
Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Aggregate.											
Number.	Cost of keep.	IN LOGGING FOR SAW MILLS.									
Total.		Horses.		Mules.		Cattle.					
Number.	Cost of keep.	Number.	Cost of keep.	Number.	Cost of keep.	Number.	Cost of keep.				
87	\$5,885	87	\$5,885	59	\$4,785	28	\$1,100				
159	10,614	155	10,284	129	8,844	26	1,420				
200	14,798	200	14,798	182	13,723	16	925				
1,023	81,590	734	59,595	722	59,145	10	300				
787	51,577	719	48,712	657	44,789	2	150				
371	20,179	249	24,139	247	23,839	60	3,877				
173	15,941	173	15,941	168	15,828	5	113				
214	15,017	214	15,017	198	14,186	16	831				
125	15,818	125	15,818	113	15,168	12	650				
136	8,649	136	8,649	116	7,937	16	530				
3,215	\$250,008	2,792	\$218,818	2,591	\$208,244	20	\$983				
978	985	945	395	188	184	337	442	649	809	850	

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE,
BY COUNTIES.—Continued.*Animals used (Continued) and Materials used.*

COUNTIES.	ANIMALS USED.— <i>Continued.</i>						MATERIALS USED.					
	Average number and cost of keep of ani- mals used.— <i>Continued.</i> — Timber camps.						Aggregate cost.	Logging.			All other materials.	
	Total.		Horses.		Cattle.			Total.	Stumpage.			Supplies.
	Number.	Cost of keep.	Number.	Cost of keep.	Number.	Cost of keep.			Quantity, M ft. B. M.	Cost.		
Belknap.....	4	\$350	2	\$175	2	\$175	\$175,735	\$25,015	9,900	\$23,050	\$1,915	\$50
Carroll.....	.....	.....	.....	.....	.....	.....	182,161	32,893	13,385	28,628	3,840	425
Cheshire.....	.....	.....	.....	.....	.....	.....	144,854	48,635	21,033	45,187	3,448	.....
Cook.....	289	21,995	280	21,074	9	\$921	812,449	306,817	134,728	298,062	7,945	.....
Grafton.....	68	2,865	68	2,865	.....	.....	600,364	305,212	83,340	285,079	20,063	40
Hillsborough.....	62	6,040	60	5,890	2	150	94,310	94,310	40,870	89,260	4,590	460
Merrimack.....	.....	.....	.....	.....	.....	.....	333,756	46,595	165,060	189,530	5,185	100
Rockingham.....	.....	.....	.....	.....	.....	.....	470,043	201,708	67,045	189,530	11,583	425
Strafford.....	.....	.....	.....	.....	.....	.....	381,851	170,345	26,300	55,465	33,400	.....
Sullivan.....	.....	.....	.....	.....	.....	.....	106,010	88,865	12,130	32,930	6,035	90
.....	.....	.....	.....	.....	.....	.....	169,189	39,055	.....	.....	.....	.....
Total.....	423	\$31,250	410	\$30,004	2	\$175	\$3,496,425	\$1,312,945	455,416	\$1,212,241	\$98,394	\$2,400

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—

*Continued.**Materials used (Continued) and*

COUNTIES.	MATERIALS USED.— <i>Continued.</i>				
	TIMBER CAMPS.				
	Total.	Stumpage.		Supplies.	All other materials
		Quantity, M ft. B. M.	Cost.		
Belknap.....	\$6,500	2,000	\$6,000	\$500	.....
Carroll.....	925	275	825	100	.....
Cheshire.....	.....	.....	.....	.....	.....
Coos.....	162,984	45,333	136,188	24,796	\$2,000
Grafton.....	14,830	6,790	12,530	2,120	180
Hillsborough.....	27,850	11,000	27,100	750	.....
Merrimack.....	.....	.....	.....	.....	.....
Rockingham.....	.....	.....	.....	.....	.....
Strafford.....	.....	.....	.....	.....	.....
Sullivan.....	.....	.....	.....	.....	.....
Total.....	\$213,089	65,398	\$182,643	\$28,266	\$2,180

DETAILED STATISTICS, NEW HAMPSHIRE, BY COUNTIES.

Miscellaneous Expenses.

MISCELLANEOUS EXPENSES.					
Total.	Amount paid for rent of works.	Amount paid for taxes, not including internal revenue.	Amount paid for rent of offices, and for interest, insurance, internal-revenue tax and stamps, ordinary repairs of buildings and machinery, advertising, and all other sundries, not reported under the head of materials.	Amount paid for contract work.	
				Logging.	Sawing.
\$20,695	\$1,379	\$2,812	\$13,454	\$3,050	.....
9,600	2,789	2,691	4,120	.....	.....
15,419	830	3,668	7,061	3,860	.....
134,988	31	14,642	70,887	49,428	.....
40,568	1,010	10,055	22,013	6,490	\$1,000
37,231	1,700	5,469	9,592	10,195	10,275
32,804	501	5,665	9,848	16,700	.....
44,340	720	4,782	8,588	30,250	.....
14,352	.....	5,536	8,816	.....	.....
8,105	1,360	2,193	4,552	.....	.....
\$358,102	\$10,410	\$57,513	\$158,931	\$119,973	\$11,275

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED

PROD-								
SAW								
SAWED LUMBER.—								
COUNTIES.	Aggregate.		Total.		White pine.		Hemlock.	
	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.
Belknap	24,663	\$295,436	22,155	\$251,626	17,340	\$190,645	2,675	\$30,541
Carroll	23,404	266,294	22,404	252,686	17,718	199,359	2,127	24,874
Cheshire	38,375	392,272	36,509	365,261	28,522	275,903	1,865	20,787
Coos	101,095	1,149,192	99,620	1,128,872	4,085	50,953	830	9,448
Grafton	93,576	1,138,683	91,956	1,116,995	15,124	160,900	11,035	110,375
Hillsborough.	66,703	730,052	64,183	694,922	57,862	632,320	5,420	54,250
Merrimack ...	74,754	830,357	70,856	772,083	57,490	620,025	11,973	136,965
Rockingham.	79,498	871,551	74,416	763,365	70,029	698,844	2,647	23,701
Strafford	40,526	475,299	38,029	430,664	34,257	389,700	2,872	31,964
Sullivan	19,664	232,794	18,662	217,897	4,704	60,244	3,671	39,960
Total	562,258	\$6,381,929	538,790	\$5,994,371	307,131	\$3,278,893	45,115	\$482,865

STATISTICS, NEW HAMPSHIRE, BY COUNTIES.— *Continued.*

UCTS.

MILL.

CONIFERS.

Spruce.		Cypress.		Norway pine.		All other conifers.	
Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.
2,140	\$30,440						
2,519	27,853			40	\$600		
6,122	68,571						
94,665	1,067,921					40	\$550
65,797	845,720						
901	8,352						
1,293	15,093						
700	10,500	1,000	\$30,000	40	320		
900	9,000						
10,285	117,668					2	25
185,422	\$2,201,118	1,000	\$30,000	80	\$920	42	\$575

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE,
BY COUNTIES.—Continued.

PRODUCTS.—Continued.									
SAW MILL.—Continued.									
SAWED LUMBER.—HARDWOODS.									
COUNTIES.	Total.		Ash.		Birch.		Chestnut.		
	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	
Belknap	2,508	\$43,810	10	\$200	15	\$320	.....	.....	.....
Carroll	1,000	13,008	75	1,050	100	1,483	.....	.....	.....
Cheshire	1,866	27,010	.....	.....	51	1,415	.....	.....	.....
Coos	1,475	20,320	.....	.....	832	11,845	175	\$2,350	.....
Grafton	1,620	21,688	186	2,962	844	11,081	.....	.....	.....
Hillsborough	2,520	35,130	445	6,650	100	2,300	1,480	19,940	.....
Merrimack	3,898	58,274	.....	.....	455	3,770	585	8,850	.....
Rockingham	5,082	108,185	282	4,270	30	500	940	17,240	.....
Strafford	2,497	44,635	75	1,750	25	350	500	3,000	.....
Sullivan	1,002	14,897	175	3,434	127	1,500	50	700	.....
Total	23,468	\$387,558	1,248	\$20,316	2,639	\$33,564	3,430	\$52,080	.....
SAWED LUMBER.—HARDWOODS.—Continued.									
Basewood.	Oak.		Poplar.		Maple.		Other hardwoods.		
	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	Quantity, M ft. B. M.	Value.	
.....	1,873	\$85,100	.....	.....	360	\$5,065	250	\$3,125	.....
.....	250	3,975	.....	.....	575	7,100	.....	.....	.....
.....	1,125	16,790	35	\$450	235	2,645	245	4,360	.....
.....	2	30	.....	.....	491	7,245	150	1,200	.....
18	147	1,640	25	250	380	5,055	20	500	.....
.....	340	5,140	.....	.....	.....	.....	95	1,100	.....
100	2,686	43,914	.....	.....	47	490	25	250	.....
.....	3,830	86,176	.....	.....	.....	.....	.....	.....	.....
.....	2,172	39,185	.....	.....	25	350	.....	.....	.....
44	181	2,645	30	300	325	4,890	70	1,060	.....
162	12,606	\$234,595	90	\$1,000	2,438	\$32,840	855	\$11,595	.....

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE,
BY COUNTIES.—Continued.

PRODUCTS.—Continued.

SAW MILLS.—Continued.

OTHER SAWED PRODUCTS.

Total.	Bobbin and spool stock.		Furniture stock.		Agricultural implement stock.		Carriage and wagon stock.		Pickets and palings.		Laths.		All oth- er prod- ucts.	Amount re- ceived for custom work.	
	Quant- ity, M.	Value.	Quant- ity, M.	Value.	Quant- ity, M.	Value.	Quant- ity, M.	Value.	Quant- ity, M.	Value.	Quant- ity, No. of 1,000.	Value.			
\$8,273	414	\$7,616	216	\$3,939	8	\$200	210	\$3,200					\$4,873	\$13,180	\$150
50,699			467	7,517			28	450			200	\$475	38,219	11,470	10
31,580	3,985	61,950					5	100			580	1,340	22,623	27,003	1,896
420,183	1,801	26,650	52	850	22	900			182	\$1,820	46,692	88,291	268,122	10,903	750
148,456	410	3,300	100	1,500			8	100			23,066	57,686	62,976	16,347	50
85,049			60	530			110	2,000			83	199	78,059	38,547	8
28,863			20	300			40	800	8	100	525	1,800	23,638	24,322	1,385
37,710	4	60	150	2,700			50	1,500					35,850	10,575	2,283
17,150			410	8,500			24	1,800					14,400	7,775	165
33,903	1,075	14,400									2,475	5,700	3,503	12,323	464
\$861,866	7,689	\$113,976	1,475	\$25,836	30	\$1,100	475	\$9,950	190	\$1,920	74,221	\$155,491	\$553,693	\$172,625	\$7,141

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED

COUNTIES.	PRODUCTS.—									
	PLANING MILL.				COOPERAGE MATERIALS.					
	Total.	Gross value of finished lumber.	Gross value of remanufactured products.	Amount received for custom planing.	Hoops.		Staves.		Headings.	
					No.	Value.	No.	Value.	No. sets.	Value.
Belknap.....	\$134,597	\$44,875	\$88,002	\$1,720	.....	.....	50	\$500	.....	.....
Carroll.....	117,648	98,688	18,425	535	.....	.....	.....	.....	.....	.....
Cheshire.....	49,710	17,160	31,133	1,417	.....	.....	3,507	15,870	250	\$4,090
Coos.....	237,737	102,254	134,538	945	.....	.....	192	1,038	.....	.....
Grafton.....	187,375	149,100	36,875	1,400	.....	.....	55	225	.....	.....
Hillsborough.....	216,903	80,625	134,100	2,178	.....	.....	2,345	9,187	68	950
Merrimack.....	236,137	147,680	80,362	3,005	.....	.....	120	600	.....	.....
Rockingham.....	103,366	81,146	20,460	1,260	.....	.....	2,450	7,200	.....	.....
Strafford.....	78,595	9,450	68,485	660	.....	.....	.....	.....	.....	.....
Sullivan.....	61,495	53,675	6,700	1,120	.....	.....	.....	.....	.....	.....
Total.....	\$1,423,563	\$789,653	\$619,580	\$14,330	.....	.....	8,419	\$34,120	318	\$5,040

STATISTICS, NEW HAMPSHIRE, BY COUNTIES.— *Continued.**Continued.*

TIMBER CAMPS.

Total.	Cooperage stock.		Excelsior stock.		Fence posts.		Hewed timber.		Hardwood and other logs (cut for export).		Logs for domestic manufacture (cut for sale).	
	Value.	Quantity, cords.	Value.	Quantity, cords.	Quantity, number.	Value.	Quantity, M ft. B.M.	Value.	Quantity, M ft. B.M.	Value.	Quantity, M ft. B.M.	Value.
\$17,050											2,000	\$14,000
17,960			100	\$500							275	2,100
7,257					250	\$50					225	1,800
560,029									150	\$1,800	73,513	451,181
235,978			45	100	3,600	400					26,500	183,300
111,737	8,500	\$25,200			29,500	1,720	25	\$200			5,500	22,500
42,290					400	50					300	1,000
65,925	4,500	36,000			2,400	340					200	800
785			60	120							1,000	3,432
8,982												
\$1,067,993	13,000	\$61,200	205	\$720	36,150	\$2,560	25	\$200	150	\$1,800	109,513	\$680,113

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE,
BY COUNTIES.—Continued.

PRODUCTS.—Continued.																			
TIMBER CAMPS.—Continued.																			
COUNTIES.	Handle stock.		Hemlock bark.		Piles.		Railway ties.		Rived or shaved shingles.		Masts and spars.		Telegraph poles.		Charcoal.		All other products.		Amount received for contract work.
	Quantity, cords.	Value.	Quantity, cords.	Value.	Quantity, num-ber.	Value.	Quantity, num-ber.	Value.	Quantity, No. of 1,000.	Value.	Quantity, num-ber.	Value.	Quantity, num-ber.	Value.	Quantity, bush-els.	Value.		Value.	
Belknap	100	\$700	6,000	\$2,250	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$550	\$100
Carroll	240	\$1,000	2,400	12,050	6,500	1,600	.....	.....	20	\$70	.....	.....	.....	.....	.....	3,000	.....
Cheshire	30	\$120	58	287	500	1,250	7,500	2,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	65,115	40,471
Crook	212	500	500	1,250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44,850	3,600
Grafton	255	940	220	1,000	.....	888	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hillsborough	229	746	200	700	55,100	13,155	.....	.....	.....	.....	.....	.....	.....	.....	.....	44,850	.....
Merrimack	3,680	16,780	200	700	5,000	2,025	.....	.....	.....	.....	.....	.....	.....	.....	.....	41,291	3,600
Rockingham	10	30	400	1,200	12,462	3,355	.....	.....	11	235	.....	.....	.....	.....	.....	21,500	.....
Strafford	5	95	.....	.....	850	220	100	\$200	.....	.....	.....	.....	.....	.....	.....	14,000	8,000
Sullivan	260	1,600	.....	.....	11,000	3,950	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State total	35	\$215	4,202	\$21,835	3,820	\$16,900	107,962	\$29,443	100	\$200	31	\$305	2,275	\$5,325	77,000	\$4,700	\$190,306	\$52,171	.....

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE, BY COUNTIES.— *Continued.*

COUNTIES.	POWER.									
	OWNED.									
	Total horse-power.	Engines.				Water wheels.	Electric motors.	Rented.	Furnished to other establishments.	
		Steam.	Gas or gasoline.							
			Number.	Horse-power.	Number.					Horse-power.
Number.	Horse-power.	Number.	Horse-power.	Number.	Horse-power.	Number.	Horse-power.	Horse-power.	Horse-power.	
Belknap.....	1,946	19	1,240	2	21	22	685	..	..	..
Carroll.....	3,215	30	1,565	..	..	37	1,650	..	..	..
Cheshire.....	3,184	34	1,585	..	..	61	1,509	..	..	..
Coos.....	4,143	30	2,470	..	..	39	1,445	9	228	..
Grafton.....	7,869	59	3,824	2	54	67	3,901	..	..	..
Hillsborough.....	4,014	50	1,938	..	..	64	2,076	..	10	..
Merrimack.....	3,813	34	1,421	2	61	79	2,331	..	..	115
Rockingham.....	2,952	39	1,740	..	..	48	1,212	..	..	..
Strafford.....	2,228	31	1,455	..	..	19	773	..	..	..
Sullivan.....	2,130	20	931	..	..	39	1,199	..	..	4
State total.....	35,494	346	18,169	6	136	475	16,961	9	228	370 464

TABLE No. 2.—LUMBER AND TIMBER PRODUCTS.—DETAILED STATISTICS, NEW HAMPSHIRE, BY COUNTIES.— *Continued.*

COUNTIES.	CLASSIFICATION OF ESTABLISHMENTS BY NUMBER OF PERSONS EMPLOYED. (Not including proprietors and firm members.)							
	LUMBER AND TIMBER PRODUCTS.							
	Total number of establishments.	No employees.	Under 5.	5 to 20.	21 to 50.	51 to 100.	101 to 250.	251 to 500.
Belknap.....	29	2	4	20	2	1	...	...
Carroll.....	45	...	8	34	3	...	...	...
Cheshire.....	61	...	17	42	1	1	...	...
Coos.....	41	...	9	17	10	1	3	1
Grafton.....	89	...	26	43	15	4	1	...
Hillsborough.....	81	1	22	49	5	2	2	...
Merrimack.....	71	...	27	40	3	1	...	...
Rockingham.....	60	2	23	31	4	...	...	...
Strafford.....	30	2	12	13	3	...	...	...
Sullivan.....	46	1	21	21	3	...	...	...
State total.....	553	8	169	310	49	10	6	1

TIMBER LANDS IN THE UNITED STATES OWNED BY
LUMBERMEN: BY STATES AND BY GEOGRAPHICAL
GROUPS.

1900.	Number establish- ments reporting.	Capital invested.	Area, in acres, accord- ing to ownership.	Average quantity merchantable tim- ber per acre, in feet.	Estimated total quan- tity merchantable timber, in millions of feet.
United States.....	8,888	\$214,989,366	32,222,097	6,700	215,550.6
Eastern group.....	1,865	40,700,556	4,498,812	4,700	20,987.3
Maine.....	204	4,427,513	2,107,606	2,000	4,317.5
New Hampshire.....	159	4,200,128	663,879	5,800	3,879.1
Vermont.....	330	2,064,800	372,754	7,300	2,746.2
Massachusetts.....	162	1,715,459	41,028	9,000	375.5
Rhode Island.....	13	50,995	1,673	3,000	6.3
Connecticut.....	50	355,102	9,195	9,200	82.8
New York.....	276	8,097,840	648,131	5,600	3,630.1
Pennsylvania.....	614	19,339,297	644,766	9,300	5,910.5
New Jersey.....	47	390,677	7,576	3,600	28.9
Delaware.....	10	58,745	2,204	5,000	10.4
Lake group.....	632	75,184,637	6,694,153	4,900	32,925.0
Michigan.....	320	24,979,990	2,747,447	5,300	14,546.1
Wisconsin.....	227	30,909,588	1,920,607	5,400	10,387.8
Minnesota.....	85	19,295,059	2,026,099	3,900	7,991.1
Central group.....	1,599	17,527,334	3,244,420	4,700	15,423.9
Ohio.....	157	3,071,577	80,699	4,100	334.8
Indiana.....	162	1,864,061	104,167	5,700	593.7
Illinois.....	167	1,110,062	162,652	4,800	778.0
West Virginia.....	221	3,158,542	506,059	5,200	2,608.4
Kentucky.....	208	2,644,006	382,649	4,700	1,787.2
Tennessee.....	410	2,717,973	1,138,649	3,900	4,496.1
Missouri.....	274	2,961,113	869,545	5,500	4,825.7
Southern group.....	3,854	54,037,320	12,414,165	5,000	62,711.9
Maryland.....	114	838,988	66,928	3,700	250.1
Virginia.....	418	2,986,491	402,360	4,300	1,712.9
North Carolina.....	629	4,680,335	1,714,135	3,800	6,488.4
South Carolina.....	251	1,410,050	454,785	4,400	1,998.2
Georgia.....	453	4,044,247	1,107,838	3,800	4,212.2
Florida.....	113	6,717,592	1,318,387	4,500	5,918.5
Alabama.....	525	5,156,012	1,224,835	4,200	5,100.7
Mississippi.....	349	7,229,835	1,214,458	7,600	9,242.7
Louisiana.....	170	6,625,622	1,497,352	6,700	9,964.1
Arkansas.....	517	7,060,807	1,741,779	4,500	7,917.8
Texas.....	315	7,287,341	1,671,308	5,900	9,906.3
Pacific group.....	643	23,784,549	3,188,149	24,500	78,141.6
California.....	156	13,403,324	1,177,537	30,600	36,087.7
Oregon.....	212	2,186,171	825,687	24,500	20,351.8
Washington.....	275	8,195,054	1,184,925	18,300	21,702.1

**TIMBER LANDS IN THE UNITED STATES OWNED BY
LUMBERMEN: BY STATES AND BY GEOGRAPHICAL
GROUPS.—Continued.**

1900.	Number estab- lish- ments reporting.	Capital invested.	Area, in acres, accord- ing to ownership.	Average quantity merchantable tim- ber per acre, in feet.	Estimated total quan- tity merchantable timber, in millions of feet.
Miscellaneous group ...	295	\$3,754,970	2,182,398	2,500	5,360.9
Colorado	59	184,136	91,993	7,300	671.1
Idaho	43	210,484	84,420	6,900	576.9
Indian Territory	16	5,358	32,347	3,800	120.5
Iowa	43	1,978,335	56,160	4,900	273.5
Kansas	22	19,841	7,680	3,500	28.4
Montana	38	452,105	95,538	6,600	632.8
Nebraska .....	.....	70,805	.....	.....	.....
New Mexico	11	112,515	1,518,780	1,500	2,319.7
North Dakota .....	.....	17,660	.....	.....	.....
South Dakota	6	90,770	5,940	3,000	18.2
Utah	23	51,827	19,300	2,100	40.6
Wyoming	21	112,301	56,960	4,500	254.3
Arizona	4	350,611	202,080	2,000	409.2
Alaska .....	.....	7,225	.....	.....	.....
Oklahoma	7	88,915	10,940	1,300	14.6
Nevada	2	2,082	260	4,000	1.1

LUMBER INDUSTRY IN NEW HAMPSHIRE.

YEARS.	Value of product.
1850.....	\$1,099,492
1860.....	1,208,629
1870.....	4,286,142
1880.....	3,842,012
1890.....	5,641,445
1900.....	9,218,310

**TIMBER OWNED AND CUT, BY SPECIES, AND AVERAGE
STAND.**

SPECIES.	Owned (M feet, B. M.).	Average stand.	1900 cut (M feet, B. M.).
Spruce	2,070,100	6,700	188,605
White pine	562,600	6,800	310,424
Hemlock	504,500	.....	45,557
Other conifers	79,300	.....	2,303
Hard woods	662,600	.....	23,468
Total	3,879,100	.....	570,357

PAPER AND WOOD PULP INDUSTRY IN NEW HAMPSHIRE.

Establishments and Capital.

COUNTIES.	Estab-lish-ments: com-mence-ment, number and charac-ter of organi-zation.			CAPITAL.					
	Total number.	Individual.	Firm and limited partnership, Incorporated company.	Aggregate.	PLANT.				
					Total.	Land.	Buildings.	Machinery, tools and im-plements.	Cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries.
*Belknap and Cheshire...	5	..	2 3	\$246,231	\$201,400	\$38,000	\$75,400	\$88,000	\$44,831
Coos.....	4	..	.. 4	4,999,278	3,302,227	400,000	822,426	2,079,801	1,697,051
Grafton.....	6	..	3 3	405,284	252,400	66,500	84,500	101,400	152,884
Hillsborough.....	4	1	.. 3	794,090	492,375	159,338	127,288	205,749	301,715
Merrimack.....	3	1	.. 2	1,003,457	554,000	93,500	203,500	257,000	449,457
Strafford.....	3	..	1 2	215,000	90,000	25,000	20,000	45,000	125,000
Sullivan.....	4	1	1 2	499,741	347,866	47,962	102,246	197,658	151,875
State total.....	29	3	7 19	\$8,163,681	\$5,240,268	\$830,300	\$1,435,360	\$2,974,608	\$2,922,813

* Belknap and Cheshire counties consolidated in order that the operations of individual establishments may not be disclosed.

PAPER AND WOOD PULP INDUSTRY IN NEW HAMPSHIRE.

Persons Employed (Continued) and Months in Operation.

COUNTIES.	PERSONS EMPLOYED: WAGE EARNERS, INCLUDING PIECE WORKERS.											
	AVERAGE NUMBER EMPLOYED DURING EACH MONTH.											
	Men, 16 years and over.						Women, 16 years and over.					
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Belknap and Cheshire.	71	71	72	72	72	73	72	73	73	71	71	71
Coccs.	1,402	1,355	1,410	1,452	1,410	1,235	1,229	1,233	1,270	1,377	1,455	1,435
Grafton.	154	154	162	157	157	162	131	133	129	127	130	131
Hillsborough.	162	162	162	162	162	162	158	160	162	162	162	162
Merrimack.	245	258	278	279	273	254	266	265	256	251	235	260
Strafford.	96	93	104	99	101	94	96	92	92	91	100	101
Sullivan.	125	129	127	128	123	125	126	125	127	126	126	125
State total.	2,255	2,222	2,315	2,349	2,298	2,105	2,072	2,081	2,109	2,205	2,339	2,305

PAPER AND WOOD PULP INDUSTRY

COUNTIES.	MATERIALS.										
	Total cost.	WOOD.									
		Domestic spruce for ground wood.		Domestic spruce for sulphite and soda fiber.		Canadian spruce for ground wood.		Canadian spruce for sulphite and soda fiber.		Other pulp wood for ground wood.	
		Cords.	Cost.	Cords.	Cost.	Cords.	Cost.	Cords.	Cost.	Cords.	Cost.
Belknap and Cheshire	\$87,373	900	\$4,050								
Coos.....	2,604,914	20,399	115,231	68,006	\$413,141	4,089	\$24,756	83,050	\$474,578		
Grafton	185,887	7,200	34,700								
Hillsborough.....	283,051	734	3,352							720	\$3,430
Merrimack.....	419,111	11,208	81,122								
Strafford.....	126,269										
Sullivan	246,729	594	3,600								
State total.....	\$3,953,334	41,035	\$242,055	68,006	\$413,141	4,089	\$24,756	83,050	\$474,578	720	\$3,430

IN NEW HAMPSHIRE.

USED.

Rags, including cotton and flax waste, and sweepings.		Old or waste paper.		Manila stock, including jute bagging, rope, waste, threads, etc.		FIBER.							
						Ground wood pulp pur- chased.		Soda wood fiber pur- chased.		Sulphite wood fiber purchased.		Other chemical fiber purchased.	
Tons.	Cost.	Tons.	Cost.	Tons.	Cost.	Tons.	Cost.	Tons.	Cost.	Tons.	Cost.	Tons.	Cost.
.....	.....	330	\$2,790	1,482	\$31,204	449	\$9,124	.....	.....	212	\$7,936	.....	.....
.....	.....	.....	.....	.....	.....	14,506	252,396	16	\$502	3,461	112,670	21	\$372
2	\$20	319	4,115	190	3,050	2,400	41,736	.....	.....	1,340	47,361	.....	.....
1,620	34,433	608	14,103	.....	.....	2,473	7,875	2,045	79,283	970	31,121	.....	.....
666	14,620	2,307	28,116	.....	.....	.....	.....	207	10,548	4,255	144,501	.....	.....
400	12,000	200	1,600	200	12,500	1,152	21,490	109	4,475	652	25,110	.....	.....
12	500	2,563	70,742	1,075	17,930	286	5,695	19	1,138	1,233	49,981	.....	.....
2,700	\$61,573	6,327	\$121,466	2,947	\$64,684	21,266	\$338,316	2,396	\$95,946	12,123	\$418,680	21	\$372

PAPER AND WOOD PULP INDUSTRY

Materials Used (Continued), Miscellaneous

COUNTIES.	MATERIALS USED.—Continued.										MIS- Total amount.
	Chemicals.	Clay.	Colors.	Sizing.	All other stock.	Fuel.	Rent of power and heat.	Mill supplies.	All other materials.	Freight.	
	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	
Belknap and Cheshire	\$6,125	\$300	\$930	\$10	\$5,135	\$8,682	.....	\$2,887	\$3,900	\$4,300	\$16,825
Coos.....	375,996	20,036	6,905	3,928	7,009	356,457	\$10,800	83,416	346,721	.....	398,194
Grafton.....	2,151	1,049	2,366	218	3,000	18,936	.....	10,548	9,581	7,056	10,202
Hillsborough...	43,135	8,159	1,592	903	.....	26,627	.....	8,923	9,982	10,133	24,257
Merrimack	10,832	13,122	4,692	3,683	.....	35,556	.....	37,920	27,149	7,250	45,984
Strafford	5,859	289	1,884	1,034	17,172	13,729	.....	5,127	.....	4,000	5,384
Sullivan	15,205	9,947	5,631	1,645	4,443	30,778	.....	5,193	9,834	14,467	39,109
State total.	\$459,303	\$52,902	\$24,000	\$11,421	\$36,759	\$490,765	\$10,800	\$154,014	\$407,167	\$47,206	\$539,955

IN NEW HAMPSHIRE.

Expenses and Products.

CELLANEOUS EXPENSES				PRODUCTS.									
Rent.	Taxes.	Rent of offices, interest, insurance, internal-revenue tax and stamps, ordinary repairs of buildings and machinery, advertising, and all other sundries not reported under the head of materials.		Contract work.	Total value.	NEWSPAPER.				BOOK PAPER.			
Amount.	Amount.	Amount.	Amount.	Tons.		Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	
.....	\$1,694	\$15,131			\$183,525								
.....	27,897	254,518	\$115,779		4,935,739	43,843	\$1,514,355	2,824	\$95,297	.....	.....	.....	.....
\$1,010	3,480	5,712	.....		355,248	1,500	89,000	500	20,000	.....	.....	.....	.....
.....	4,111	20,146	.....		415,841	300	12,600	111	4,352	4,392	\$293,310	1,329	\$54,130
100	10,444	35,440	.....		691,593	.....	.....	8,800	352,000	39	4,000	604	51,778
600	284	4,500	.....		247,862	.....	.....	.....	.....	.....	.....	.....	.....
200	3,085	30,451	5,373		414,925	.....	.....	.....	.....	4,706	320,835	.....	.....
\$1,910	\$50,995	\$365,898	\$121,152		\$7,244,733	45,643	\$1,606,955	12,235	\$471,649	9,137	\$618,145	1,933	\$105,908

PAPER AND WOOD PULP INDUSTRY IN NEW HAMPSHIRE.

Products (Continued), Machinery and Capacity.

COUNTIES.	PRODUCTS.—Continued.						MACHINERY.										CAPACITY.										
	Other paper products— <i>Continued.</i>		Ground wood pulp.		Sulphite fiber.		Value.	Tons.	Value.	Tons.	Paper machines.				Beaters.				For mills making their own soda or sulphite.				In paper.	In pulp.			
											Made to sell as such.		Made for own use.	Total width (inches).	Cylinder.	Wet.	Beating en- gines.	Washing en- gines.	Jordan or re- fining engines.	Number.	Total capac- ity (tons).	Boilers used for digestors.			Cooks per week.	Grind- ing mills mak- ing ground pulp.	
Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Number.	Total width (inches).	Number.	Capacity (pounds).	Number.	Capacity (pounds).	Number.	Capacity (pounds).	Number.	Capacity (pounds).	Number.	Number.	Number.	Number.	Tons (yearly).	Tons (yearly).				
Belknap and Cheshire.	.....	.....	1,102	\$14,325	.....	.....	80,718	\$2,711,278	.....	.....	12	1,158	3	196	4	16	6,750	2	2,700	12	18	231	18	245	42	2,924	1,200
Coos.	.....	.....	22,061	975	103,250	7,134	80,718	\$2,711,278	.....	.....	1	142	1	51	21	26,100	2	26,100	.....	.....	5	.....	.....	.....	7	60,396	116,819
Grafton.	593	\$27,668	1,200	5,500	88,000	.....	.....	.....	.....	.....	3	198	2	137	16	30	9,625	8	7,400	5	.....	.....	.....	4	8,026	6,200	
Hillsborough.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	306	.....	5	21	13,500	10	8,200	6	.....	.....	.....	.....	18	17,550	.....
Merrimack.	2,222	108,454	.....	.....	.....	.....	.....	.....	.....	.....	7	572	1	64	7	20	18,800	10	8,200	4	.....	.....	.....	.....	.....	5,930	.....
Strafford.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	84	7	300	4	22	16,400	4	2,250	5	.....	.....	.....	.....	.....	5,850	1,200
Sullivan.	.....	.....	900	.....	.....	.....	.....	.....	.....	.....	3	216	2	128	13	13	8,200	4	2,250	5	.....	.....	.....	4	.....	.....	1,200
State totals.	2,815	\$136,122	24,161	\$205,575	7,134	80,718	\$2,711,278	\$24,375	31	2,594	16	2,594	143	967	89	143	99,375	24	20,550	43	18	231	19	6,400	248	106,518	126,919

The purpose of the publication of the foregoing facts, statistics and conclusions is of course apparent; properly to assert the dignity and prosperity of the state and its varied industries, repelling the ridiculous assertions of its utter dependence upon summer travel, without the income from which it is alleged she would be "poverty stricken," such a decadent and abject commonwealth as would offer no attractions to intelligent self-respecting sojourners, and to attempt an antidote for the actual detriment wrought the state and to its income from summer travel, through false impressions created as to the destruction of our forests, the denudation of our hillsides and the drying up of our streams, all factors in the general picture of delight that nature presents to those who see her charms on our breezy hillsides, sparkling waters and lovely valleys. New Hampshire continues to welcome all who come to test her health-giving breezes—the latch string is out from the Third lake in Pittsburg to Boar's Head or Great Monadnock, and with vitality and beauty unimpaired.

FOREST FIRES.

The forests of New Hampshire have been especially free from fire for a long period of years. With the exception of the disastrous fire in the Zealand region in 1888, following the operations there of the Messrs. Henry and their associates, there have been no forest fires of great magnitude in our state for more than twenty years. Fire is the greatest enemy of the forest, being more disastrous than both the axe and vermin combined; for while denudation, whether by the hand of man or by the action of natural causes, never destroys the conditions of reproduction, fire not only checks the growth of the standing forest and destroys the fallen and blights trees, but in many cases actually burns up the soil itself, that humus covering which is the forest's own product and which it forms over the naked rock at the slow rate of one foot in from one hundred to two hundred years. The absolute nudity of the summit of Mount Chocorua, for example, is a striking

instance of what a succession of forest fires will accomplish. That bald, naked, glistening, and serrated cone, so absolutely distinguishable among all New Hampshire's summits, is much below the normal timber level in its altitude, and yet the growth with which it was once covered has been entirely removed by the flames, and the soil upon which it stood has also gone, leaving to nature the slow work of again creating the conditions for forest growth by making there again a new soil through the long and wearisome processes of the evolution of plant life from the lowest lichen forms up through the herbs and the shrubs to the completed and finest forms of botanical classification, namely, the hardy evergreens, which are at once the most persistent and useful of all the tree growths of the temperate zone.

OUR FOREST FIRE LAWS.

Two causes operate to give to New Hampshire forests this gratifying immunity from forest fires. First of all the topography of our largest forest areas contributes to check any forest fires which might occur. Fires run much less rapidly in mountainous forests than in those which stand on more level sections of country; and, since practically three fifths of all our forest growths lie in the three upper counties of Grafton, Carroll, and Coos, where, also, our rugged hills rise to their greatest heights, we have been well fortified by nature against extensive ravages from forest fires.

Our forest fire laws constitute the second element of our protection. These statutes, enacted in 1893, and based in the first instance upon the eminently practical suggestions of Dr. Bernhard E. Fernow, then chief of the forestry division of the national department of agriculture and now dean of the New York State College of Forestry, make the selectmen of towns forest fire wardens *ex officio*. These officers are directly charged with the duty "to watch the forests and whenever a fire is observed therein to immediately summon such assistance as they may deem necessary, go at once to the scene of it, and, if possible, extinguish it." So far as we

have observed, and the fire records fully substantiate our observations, these duties have been faithfully observed by the selectmen of the several towns; and the few fires which have occurred within their jurisdictions have been promptly checked.

FOREST FIRE WARDENS.

Similar duties were laid upon the county commissioners with reference to those regions where no town organizations exist. It soon became apparent, however, that these officers, few in number, and often living at remote distances from the heavily forested areas, could not be expected to be as effective forest fire wardens as the selectmen. Accordingly, at the suggestion of this commission, the law was amended at the next session after its passage so as to provide for better protection in the remote sections of forest growth. Under the amended law the privilege of adequate protection against fire was given to all owners of forests in the unincorporated townships by providing that the Forestry Commission should, upon the application of any such owner, appoint a suitable number of fire wardens, fix their compensation and limit their term of employment. The expense of such service is chargeable one half to owners and one half to the county. Few appointments have been made under this law. The Hastings Lumber Company, however, the proprietors of extensive forests in the township of Green's Grant, have enjoyed the service of special forest fire wardens from the first, and have maintained a strict patrol along the line of their lumber railroad.

PRESERVATION OF SHADE TREES.

The law of 1895 providing for the marking of shade trees by selectmen was found in its application to be of doubtful value, inasmuch as the restrictions placed upon the selectmen in their working under the law proved too limited to permit of the law's full effect in preserving the beauty of many of the highways in the state. Accordingly, at the session of 1901, this law was repealed and a new law enacted

which is much more explicit in its provisions, and which in its workings as thus far observed appears to justify its existence.

Under this law, shade trees which are to be preserved are selected by a tree warden who, in the language of the law, must be a competent person, and the cumbersome and expensive tag of brass bearing the state seal has given way to a metallic spike having upon its head the letters "N. H." An appropriation of five hundred dollars a year to cover the cost of these spikes has proved thus far ample for the purpose, and under the terms of the law more than one hundred thousand shade trees have been preserved for the adornment of our highways.

The tree wardens being vested with wide discretion in the matter of the selection of the trees for preservation, have, so far as the board can learn, performed their duties with tact and zeal. Complaints have arisen in only one town, and as the law provides ample reparation for any abutter who may feel himself injured by the tree wardens' selections, it is probable that the difficulties in that community will be successfully dealt with by the courts.

So far as the board knows, also, the trees thus designated by the tree wardens have been respected as public property, and in only one town has information come to our knowledge that spiked trees have been cut contrary to the provisions of the law. In this town steps have been taken to prosecute the offenders, and, as the penalties prescribed for the illegal removal of spiked trees are somewhat drastic, it is unlikely in case of conviction in this instance that other depredations will follow.

THE SECONDARY FOREST.

The commission has chiefly confined its attention to forest conditions in the northern portions of the state, because there are centered within three counties upwards of two million of the approximately four million acres of our forest growth. In this same section is practically all of the original

forest area still left to us. And there, too, are those unique and entrancing factors in New England scenery, the White Mountains. It was the threatened and apparently immediate denudation of these magnificent slopes, which gave the initial impetus to New Hampshire forestry; and because of the intimate relation of these forests to the economic welfare not only of our own people, but to the people of all the New England states save one, that the commission felt justified in devoting so large a share of their attention to the securing of better and more rational forest conditions in these sections.

But we have not been unmindful of the interests of the secondary forests of the state, which lie for the most part in the southern and central tiers of counties, and which, though presenting few single areas of large extent, nevertheless in the aggregate comprise an acreage equaling that of more than one fifth of the total area of the state.

These forests in their commercial aspects may be said to consist of a single species, the white pine (*Pinus strobus*), valuable for nearly every use to which forest products are applied. The white pine, as we have said in previous reports, is the largest, most useful, and has the greatest range of distribution of our conifers. Originally two great belts of this valuable species occupied the valleys of the Merrimack and the Connecticut, which contained some of the finest timber in New England; but this primeval growth has long since disappeared and only a few scattered remnants, each of a few acres, now remain. The farm of the New Hampshire College of Agriculture and the Mechanic Arts, at Durham, has upon it the last considerable area of primeval pine in the state, so far as we have been able to ascertain. A few specimens of original pine stood for a long time in the town of Rye, where they were a familiar landmark for sailors and fishermen, in this connection being alluded to by Whittier, who spoke of the vessels departing from the shore as having

"Lost the sight of the pines of Rye."

These old tree growths having been removed, the soil which they occupied was turned to tillage or pasturage during those decades which were devoted chiefly to extension of our agriculture. With the changes which occurred in the conduct of this industry and its coincident abandonment of many fields and even of entire farms, the pines again crept into their ancient holdings. The white pine seeds very freely, and the sites of many of the ancient forests began to indicate themselves by tracts of vigorous sapling growth, which in from twenty to thirty years became of sufficient size for pail and kit stock, for box boards, etc., and in from fifty to sixty years to suitable dimensions for the manufacture of boards and timber. Springing up as this growth did upon so many of our worn-out or abandoned farms, it made industry and prosperity possible in many sections where otherwise there would have been a much more narrow and straitened life.

NATURAL PINE LANDS.

Within the limits of the distribution of this useful species there have appeared, naturally enough, certain sections pre-eminently suited to its culture. Chief among these are central Hillsborough and Cheshire counties, where, either through the topography and conformation of the land, the qualities of soil, or the relative humidity, the white pine has flourished exuberantly, and it has been no uncommon thing in the pursuit of the kit manufacture and kindred industries to remove successive crops at no longer intervals than twelve to fifteen years. These industries, none of them of great magnitude, but in their aggregate distributing a large sum of money every year among the farmers and other woodland owners in their immediate vicinity, were valuable elements in the prosperity of the state; and, had they continued, would have insured a small but constant source of revenue to many sections; and, so long as they continued to utilize on the average no more than the annual wood increment of their sustaining woodland growths, would have obviated any serious necessity for vigorous forestry agitation in these portions of the state.

THE DIAMOND MATCH CO.

The appearance of a new factor in the field of forest industry has, however, entirely changed the conditions of the manufacture of the white pine product. A few years since, the Diamond Match Company, better known as "the match trust," began operations in New Hampshire. The method of the small manufacturer was to buy pine in the log from the farmer or the jobber, and they, except in rare instances, confined their cuttings to trees of reasonable size, leaving a considerable nucleus of thrifty young growth as a basis for a future crop and for seeding. The practice of the Diamond Match Company was wholly different. Buying logs only where the land itself could not be had, it took title to large areas of secondary forest, erected mills, and proceeded to clear the lands utterly, sending the resultant product out of the state in the rough for completed manufacture elsewhere.

As a consequence many small sawmills and wood-working factories in the southern counties were forced out of business, and the landowners received a lump sum for their wood-lots instead of the regular annual revenue from the sale of logs. The wood-lots thus stripped of their growth were abandoned by the operators, and the towns found their inventories diminished by the valuation formerly set upon the wooded lands. And the employment afforded by the match company during the brief period of its operations was far less than that offered steadily by the small manufacturers who had been driven out of business.

Before dismissing the operations of this company from consideration, it is fair to say that its managers are now coming to perceive the shortsightedness of their initial policy; and they are now instituting new methods of harvesting their timber crops. Cuttings are now confined to the larger growths, and on certain of their denuded lands the company plans for extensive reforestation by seeding and by the transplantation of seedlings. Such a policy, if consistently ad-

hered to, will remove further reason for criticism based upon an unwillingness to see the resources of the state diminished; and by insuring the perpetuation of the company's operations will serve to maintain a much-needed source of revenue in the affected communities.

ATTEMPTS AT REFORESTATION.

In connection with these plans for reforestation in lands recently denuded, it may be wise to call attention to some further attempts of private enterprise in the same line upon lands once used for agricultural purposes but now given over to the undirected forces of nature for the restoration of the forest cover. The plantations of Mr. Isaac Adams, in Carroll county, were mentioned in detail in another place; and the plantations of the late Hon. John D. Lyman, at New Durham, have become well known in many sections through their late owner's enthusiastic attempts to set others to following his example. Less familiar, however, is the work of reforesting begun by the late Mr. Austin Corbin upon his estate at Newport, where by means of transplanted pine saplings he made permanent a shifting soil of sandy structure, adding greatly to the attractiveness of his property and assuring an added value to it from year to year as the planted crop matures. Mr. Gordon Woodbury, upon his estate at Bedford, has also under way an experiment at reforestation on a large scale, which already gives excellent promise of large returns within the lifetime of its owner. In Cheshire county, the Butterick Publishing Company, once the operator of a flourishing box mill, now absorbed by the match trust, and still the possessor of many acres of farming and wood land, is planning for the immediate reclaiming of an extensive area of abandoned pasture through reforestation.

Such efforts mean the ultimate addition of large sums to the valuation of the state and to its resources, while the benefits of large forested areas for the conservation of the water supply can hardly be overestimated. Indeed, so closely

related to the entire prosperity of the whole state is the matter of extending the present limits of the forested area, that it seems to us wise for the legislature to take into consideration the advisability of state co-operation to secure this much-to-be-desired result.

EXEMPTION OF FOREST PLANTATIONS.

In other states where conditions akin to those mentioned have arisen it has been found that by a remission of taxation, in whole or in part, landowners have been encouraged to bring under forest cover large areas of denuded or waste lands which otherwise would never have increased in value, but which under the continued growth of a planted tree cover have been found to add materially to the wealth and resources of the community. It has seemed to us that New Hampshire by adopting some such course could materially add to its wealth through the permanence of its forest cover, and we accordingly suggested that the legislature of 1901 provide for the partial remission of taxes upon lands planted with desirable timber trees, in a specified number to the acre, this exemption to continue during the period of the forest's most rapid growth. Such a law was introduced at the last session of the legislature, passed the house, and failed in the senate only because it was not reached before the closing hours of the session.

We advise again that some such action be taken by the legislature of 1903.

SUPPLY OF SEEDS AND SEEDLINGS.

If, at the same time, the state's paternal aims could be so directed as to encourage reforestation additionally by supplying to landowners seedlings of timber trees at cost or at a mere nominal price, the process of extending the forest cover would be greatly facilitated and the area of land so treated largely increased. It has been argued that the establishment of a tree nursery by the state itself for the supply of such seedlings might prove neither profitable nor successful. It is

urged that it would require no little expenditure of money to establish a nursery within the state, and that it would be some time before the products of such a nursery could be ready for landowners who were willing to use them. Moreover, if there should prove to be no large demand for seedlings for plantation, the invested capital would have gone to waste. The alternative is therefore suggested that if the state should authorize the Forestry Commission to contract with some reputable nurseryman already established in some other state for the supply of a given number of seedlings of specified varieties of each year, an immediate step could be taken toward reforesting those areas which most urgently demand it, and if the experiment should prove unsuccessful the state would have no permanent investment in a tree nursery upon which to realize a loss. If, on the other hand, the demand for the seedlings prove sufficient to warrant, the legislature of 1905 could take steps for the establishment of a permanent nursery.

LEGISLATION DIFFICULT.

Forest preservation with rational utilization of the forest product is difficult to regulate by legislation. Under a more dictatorial form of government than ours, as for example, in the German Empire, no difficulty arises in the reservation and management of immense tracts of forest cover for the benefit of the general government. Here, however, this is not so easy; even in those states where forest preserves have been instituted, every attempt thus far made to throw them open to lumbering operations, though conducted upon the most rational basis, has been defeated amid a storm of popular disapproval. The national government, too, with its millions of acres of forest reserves has never undertaken a systematic removal of the mature trees in its forest cover as a matter of revenue. Wherever forest preservation has been brought about it has been through the exercise of the power possessed either by the state or national government, without view to future emolument other than that received from the mere fact of forest preservation itself.

In years past this commission has held and still holds that if the state of New Hampshire could — by the exercise of the power of eminent domain and through direct taxation, or by the proceeds of an issue of bonds — secure again to itself the ownership of those forests with whose title it parted thirty-five years ago, it would be a step of immeasurable advantage and profit to the whole community. But we realize the unwillingness of the people to tax themselves for this purpose, even upon a conclusive showing, such as can be and has been made, not only of the ultimate but of the immediate financial profit to accrue from such a course. In view of repeated rebuffs in successive legislatures we hesitate to press again this proposition upon our lawmakers, although we abate nothing from our opinion that such a course would immediately settle the vexed question of forest preservation in New Hampshire, and would assure to the state for all time a perpetual and increasing revenue from the sale of matured timber. In the absence of applying such a general policy of forest purchase and management, it may be well for the legislature to consider the advisability of purchasing and holding in preserve such strategical points in the White Mountain forests which, by reason of their relation to the head watersheds of our great commercial streams, or by their relation scenically to the ever extending volume of summer resort business, particularly commend themselves as the wards of a paternal state government. There are a few such spots which are now threatened by the axe and which can be procured for the state at fairly reasonable prices.

A FOREST MAP.

The basis of all scientific forest management is, as this board has heretofore remarked in other reports, an accurate topographical knowledge of the forest cover. In all cases where any well devised scheme of forest preservation and management has been put into operation, an accurate mapping of the territory affected has preceded all else. We therefore again call attention to the opportunity which the

state possesses to coöperate with the national government in completing the topographical survey of the state, which was begun many years ago but which has been neglected because other commonwealths have taken advantage of the opportunity for coöperation to advance their work to the detriment of that in those states which have depended upon the national government alone to complete it. The work already done in New Hampshire is confined to border towns along the line of Maine, Massachusetts and Vermont, and to the White Mountains, where the major peaks of the Presidential Range have been surveyed and completed. Accompanying this report will be found a copy of the White Mountain map, showing the character of the work. The extension of these maps over that portion of the state which bears the heaviest forest cover, that is to say, speaking roughly, over the northern half of the state above Lake Winnepesaukee, would be of inestimable value in outlining any plan for systematic forest management in that section, and would be of incalculable service to many of our people, saying nothing of its benefit to the thousands of summer visitors who yearly come into that region. We therefore recommend that an appropriation of not less than \$5,000 be placed at the disposal of the commission, for securing the co-operation of the United States Geographical Survey in continuing this work in the section above referred to.

A NATIONAL WHITE MOUNTAIN PARK.

Elsewhere we have spoken of the project to establish a national forest park in the Southern Appalachian mountains. This plan, now well matured and enthusiastically supported, has already won the favorable consideration of the national senate; and its friends hope to secure its passage through the house at the approaching short session of congress.

Assuming their success in this effort, it is reasonable to ask whether government action of this sort is to stop here. The forest reserves set aside by executive proclamation under the act of congress of March 3, 1891, are made up of lands already owned by the government. The Appalachian Mountain park

contemplates a purchase by the government of lands now owned by private individuals. If such a policy is to be inaugurated, it ought not to be confined to the single area under consideration in the Southern Appalachians. The White Mountain region has claims equally logical and forceful.

THE ARGUMENTS IN ITS FAVOR.

The chief arguments adduced in favor of establishing a national forest reserve in the Southern Appalachians are :

That those mountains embrace high peaks and large mountain masses. The same is true of the White Mountains, where altitudes and bulk are scarcely less than those found in the southern chain.

That upon these mountains descends a very heavy rainfall. A like meteorological condition is found in the White Mountain region.

That denuded slopes in those mountains rapidly lose their humus and then the underlying strata, which are washed down to ruin fertile fields below. The same is true almost to an equal degree in the White Mountains.

That the rivers originating in those mountains flow through many southern states, and possess agricultural, water-power and navigation interests along their courses which are essential to be preserved. The rivers originating in the White Mountain region flow through all the states of New England, save one; they support the largest manufacturing interests; they afford water-powers of great magnitude; they relate to rich and profitable agriculture.

That the regulation of the flow of these rivers can be accomplished only by the conservation of the forests. The Merrimack, the Saco, the Androscoggin, the Connecticut, the Piscataqua rivers are absolutely dependent for their equable flow upon the preservation of the forests of New Hampshire in their substantial integrity.

That the Southern Appalachians bear rich forests of hard woods. The forests of the White Mountain region are the finest growths of conifers found in the East. These forests are

characterized by a close and heavy stand of tall, straight trees of the most valuable and useful species found—the spruce—and furnish supplies which cannot be had from any other region except at great cost.

That the economic reasons for the preservation of the Appalachian forests are imperative. Not less so are the economic reasons for preserving the forests of the White Mountains. Upon these depends the prosperity of the lowlands through which their waters run, and their management under rational forestry principles will perpetuate and increase the resources of this region, will afford a valuable object lesson in the advantages and practicability of forest preservation through use, and will soon render them self-supporting from the sale of timber.

That the agriculture of the South must be protected and preserved, an end to which forest preservation is an indispensable condition. Equally important is it to preserve and extend New England agriculture.

That southern floods will increase if forest destruction continues. This is equally true of New England.

That southern forests, streams, and agriculture cannot be preserved by state action, hence the national government must assume the duty. If federal action is justified there on such a ground, much more is it justifiable here.

THE ONLY METHOD.

In the course of an elaborate argument submitted to congress in advocacy of the Appalachian Park proposition, the Secretary of Agriculture declares himself able to find but one way for these forests to be preserved, and that is by the federal government's buying the forest-covered mountain slopes and making them into a national forest reserve. A like conclusion would be reached in an extended study of the conditions attaching to the White Mountain forests.

It is declared to be a proper national function to restore the Appalachian forests already injured and to reforest the steep slopes already cleared, because the results are national in their

importance and extent. Satisfactory protection and development of those forests are declared to be wholly beyond the agency of private individuals, who have no direct interest whatever in the protection and perpetuation of water-power, agriculture, and navigation along the lower courses of the streams whose headwaters centre there. This is equally true of White Mountain forests and their owners.

It is urged, also, that the states within whose territory the Appalachian forests lie cannot be expected to convert them into a forest reserve.

The states do not own any of those lands. It is pointed out that North Carolina, for example, cannot be expected, at great expense, to create a forest reserve for the protection of streams which, though arising within her borders, lie mainly in other states; nor can Alabama be expected to purchase lands in Georgia for the protection of a great river emptying into Mobile bay.

These arguments all apply with equal or greater force to the White Mountain situation. New Hampshire owns no public lands. The rivers which have their origin within her borders contribute more largely to the prosperity of other states than to hers. She ought not to be expected to burden herself with debt for the benefit of her neighbors; and her neighbors cannot rightfully be asked to contribute money to buy land here.

A NATIONAL PROBLEM.

In summarizing his views on the Appalachian Park proposition, Secretary Wilson says:

“This is a national problem. The people of a number of states are directly interested. The dangers growing out of the policy now in force are national in their character, as are also the benefits to be obtained by the policy now advised. This proposal for a national forest reserve has already been discussed and commended by our ablest men of science, by practical lumbermen, by the forestry associations, by many of the business organizations of the country, and by both the technical and the general press. * * * * *

“Congress has wisely provided for the setting aside out of the public domain, and thus withdrawing from sale, many thousands of square miles of valuable forest lands, with a view to protecting the streams and perpetuating the timber supply about the mountains in our western states and territories. And while the measure now proposed involves a purchase instead of a withdrawal from sale of forest lands formerly purchased, the principle and purpose are the same. In both cases, even if judged simply as a question of finance, the government’s investment will ultimately prove a good one.”

The advocates of a White Mountain park under federal ownership can state their case with equal force upon all these heads. And, in addition, the national character of the problem here is largely emphasized by the fact that the White Mountain forests not only affect the manufactures and agriculture of the five New England states through which flow the waters of the Merrimack, the Connecticut, the Androscoggin, the Saco, and the Piscataqua, but by the further fact that thousands of people, coming from all the states, resort to the White Mountain forests every summer in search of recreation and health.

NOW IS THE PROPER TIME.

If the general government is ever to become interested in this section, the time seems now ripe for the first steps to be taken. Public attention is now being aroused with reference to the new policy of creating forest reserves by purchase. It is fitting that congress should examine into all the propositions of this kind at the outset, so that the initial step, when once it is taken, shall be known to be not an isolated and unique example of such an exercise of a national function, but the first move in a general plan aiming to bring all unprotected danger spots under federal guardianship. One such locality is the White Mountains.

There are certain places in our country that are highly favored by nature in having not only grand and beautiful scenery, but also the purest of water and a salubrious and

health-giving climate, and these places are not so numerous that they should not be fostered and protected by a permanent influence, and what so permanent as our national government? The White Mountains are undoubtedly a pleasure-ground and residence place for a larger number of citizens from nearly every state in the Union (for at least a portion of the year) than any other place in this country. On looking over the registers of the different hotels in the White Mountains, it is easy to discover the truth of this assertion.

Now, under the circumstances, with the increase in population in the eastern and middle sections of our country, does it not seem that our national government should acquire possession of these specially interesting and attractive places and make a park or reservation of them as a pleasure-ground for all the citizens of our great country who wish to avail themselves of it?

Now, with the disappearance of our forests our water supply will also disappear, as the latter inevitably follows the former, and when these two have disappeared the White Mountain region will no longer be a desirable place of residence for the summer tourist. The attractiveness will have disappeared and they will seek other regions. There are millions in our country who love these superb scenes and who can see in them infinite possibilities for the uplifting of humanity by the inspiration which they receive from living in the midst of these grand mountains and noble forests, and they carry back to their busy teeming lives in the cities memories that can never be effaced. They are inspired with new thoughts and high resolves and are instrumental in helping to uplift those who have not had this privilege. In this way the influence which is received from a visit to these mountains is spread throughout the length and breadth of our land.

OTHER NATIONAL PARKS.

The government has already established by proclamation the Yellowstone park, containing over two million acres in Wyoming; the Sequoia, containing 161,280 acres,—all three in California; and the Mount Rainier park, of 207,360 acres

in the state of Washington. None of these parks or reservations are east of western Dakota, they are west of the 103d meridian, yet the population west of the meridian is approximately four million as against seventy-one million east of it. The increase west has been but 980,000 since the census of 1890, while the increase east was over twelve million; thus ninety-five per cent. of the population of the country is east of the meridian, west of which the present parks and reservations are located. The question at once arises, why should not the eastern section of the country contain such a reservation, either in the form of a national park, or of areas set apart under such restrictions as would preserve and foster the forest growth now rapidly disappearing? The need of intelligent action respecting forestry is now universally conceded. The government is committed to such an action upon its great western reservations. The federal government possesses the facilities for controlling such reservations in a broad way, unaffected by local or private interests, upon plans that will permit the use of the forests that remain, directing with intelligence such cutting as is proper, and promoting new growth on the denuded areas. The subject is exceedingly important in its relation to the prosperity of the farmer, who is largely dependent on the climate and rainfall, to the great manufacturing interests, more or less dependent on the water-power furnished by our rivers, to the rapidly growing cities and towns whose water supply is drawn from our northern lakes, to the health and pleasure of thousands who annually visit the mountains and uplands of northern Vermont, New Hampshire and Maine.

THE WHITE MOUNTAIN REGION.

The White Mountain region proper of New Hampshire covers an area of more than 1,200 square miles. Dominated by Mt. Washington and the Presidential Range, flanked by the Franconia and Sandwich ranges, it includes also groups of lesser peaks, feeding the Connecticut and Merrimack rivers, the Saco, the Androscoggin and many tributary

streams, the source of the water-power of hundreds of manufacturing villages and cities, to which the growth of New England is so largely due. It is a region of great historic interest, closely associated with the past and present life of New England, interwoven with its romance, poetry, art and tradition.

If the attention of congress is to be directed to this region, as one amply deserving federal ownership and control, the legislature of 1903 may properly adopt resolutions favoring the establishment of a White Mountain national park, and requesting our senators and representatives in congress to urge the subject upon the consideration of their fellow legislators.

FORESTRY KNOWLEDGE.

The knowledge of correct forestry principles spreads slowly ; but during the period of the commission's efforts it is believed that certain definite and valuable advances have been made in adjusting correctly the relation of the public to the forest cover. The recognized dependence of mankind upon forest growths for timber, fuel, and so many of the necessities of daily life, in the development of which man has shown so much of his ingenious capacity, is so great that it is not unnatural that in the first enthusiasm of forestry agitation in our state, an extreme and radical view prevailed ; and that a vigorous demand was raised for the immediate and total cessation of lumbering operations which affected the mountainous region so unique and valuable as a summer resort, and so intimately connected with the head watersheds of New England's most serviceable waterways.

This view, however, has now been practically abandoned. The fundamental concept of rational forestry, namely, that forests are grown to be used, is now the prevailing basis in formulating the rightful demands of the public upon the private owners of our forest areas. The woodman is no longer asked to spare every tree, but to spare such trees as are not of sufficient maturity to render them commercially

valuable, or which are so placed as to give no hope for their immediate reproduction in case of removal, or which ought not to be removed by reason of their consummate value in the relations they sustain toward the scenic and economic interests of the commonwealth.

THE FUNCTIONS OF THE FORESTS.

In formulating these demands the forester makes no extravagant statements of the forest's claim to stand because of its relation to rainfall or climate. Despite an exhaustive research, the commission has been utterly unable to unearth or to formulate any body of facts tending to prove even the remotest connection between forest areas and the total precipitation. The average annual rainfall in New Hampshire is about forty-two inches, and the amount has varied but little from year to year despite man's increasing efforts to destroy the balance of nature. The function of a forest in relation to the water supply is wholly mechanical. First of all the limbs and foliage serve to check the fall of the rain, thus decreasing the force of its impact upon the forest floor and preventing a hardening of the surface which would hasten the running off of the waters. The trunks and the protruding roots tend to hold in check the deep masses of snow which fall upon the mountain slopes and to prevent their sliding to the lower levels. Again, the spongy duff, accumulated from the forest litter through the ages, holds in reserve the melted snow and ice, giving it slowly out in summer as it drains through the porous structure into the streams below, and thus equalizing the flow of water in the larger courses which feed from the mountain brooks. And, finally, the shade of the forest materially lessens the evaporation during the heated term and saves for its destined use in the waterways the precipitation so generously given during the early spring.

To these, two other factors must be added to make up the argument in favor of the rational use of forest growths, such as we have above indicated.

First, the sentimental factor as exemplified in the attractions which the mountain forests maintain for summer visitors. When one reflects more deeply upon this phase of the forestry question, it is hard to locate the exact line of demarcation between the sentimental and the practical, for while it is almost wholly for their æsthetics that the forests attract the tourist, the revenue thus obtained for the state makes the subject of rational forest preservation a most eminently practical matter.

THE NECESSITY FOR FOREST PRESERVATION.

Last of all, though to our minds the chief in importance, must be considered the effect of unwise forest management upon the forest industries themselves. The perpetuity of every lumber mill, every pulp mill and every paper mill depends upon the productive capacity of the forest which sustains it. Under proper regulations that productive capacity can be enlarged and perpetuated, and no interest of the lumberman or the pulp manufacturer can be second to the securing of rational forest condition upon all his lands.

With this end in view the commission has continuously directed its efforts to enforcing these facts upon the attention of landowners and timber operators, with the result that, whereas at the beginning of our efforts not more than one of all this class was conducting his business under any systematic endeavor to insure to his mills an endless supply of raw forest material, to-day not more than one of them is operating without such endeavor, and some of them have so far developed the rational theory of forest management, that they employ large corps of trained men, some of them educated in superior forestry schools, to direct every detail of their forest work. Whether the enlightened self-interest thus aroused has demonstrated its value sufficiently to insure its continuation without the spur of official stimulus on the part of the state is a question yet to be determined; but certain it seems that the results thus far obtained by the commission along this line of effort justify the state in its action in permanently establishing the forestry department as a branch of government.

In line with the immediately foregoing matter the board submits the following

SUMMARY.

1. Approximately there are 4,200,000 acres of woodland and forest in the state, or about three fourths of its area, of which 2,300,000 acres are in the three northern counties, Coös, Carroll, and Grafton. Perhaps 700,000 to 750,000 acres of this is original growth, or the stand of trees on lands cut over so long ago as to be practically timber lands at the present time.

2. Of this area, in the North Country where are the great mountain houses for summer business, and where also is the domain of the lumberman, less than ten per cent. has been cut or burned over beyond the power of unaided nature to restore scenic conditions, and to-day the total area within the state covered with foliage, from young growth to the primeval trees inclusive, is doubtless larger than at any time during the last fifty years.

3. Unfortunately it is the fact that lines of railway built to encourage and accommodate tourists, have also made profitable to the lumberman tracts of scenic beauty before inaccessible and thus encouraged cuttings in territory that should, if possible, have been exempt from attack, and in the most noticeable locations, as around the western slopes of the Presidential Range, the lower Ammonoosuc valley, the Franconia Notch, Glen Ellis falls, the Peabody River valley; all beloved of tourists.

4. To a degree these spaces, for a time desolate and of forbidding aspect, have become covered by a new growth, and save where fire has left bleached trunks (themselves falling prone in the new foliage and thus hidden), mountain sides and valleys are again covered with verdure, so that the decaying debris of lumbering operations alone witness former work. The original trees are gone, but it often requires a trained eye to distinguish the new trees, or wherein the contour of hillside and glen is not as grateful to the eye as before lumbering operations commenced.

5. Nature thus reproducing itself, it is not strange that the water-flow over weirs on the larger streams like the Connecticut, Androscoggin, Saco and Merrimack shows no diminution, nor is erosion visible on the hillsides to any great extent. While the destruction of original forests is from a scenic and economic point to be regretted, there is much unfounded comment and alarm upon the result of timber cutting; nor is there data to prove any diminution of the annual rainfall (about forty-two inches per annum), loss of water-power or climate changes therefrom.

6. Statistics in their proper place in this report demonstrate certain of these conclusions and show the comparative volume of the manufacturing, agricultural, lumber and summer business, industries of the state, which will, perhaps, give a clearer and more just comprehension of existing economic conditions than always obtains.

7. The commission is called to face, not theories alone, but facts and results. The forest and wooded areas of the state belong entirely to private owners, who have the right to do what they wish with their own, subject only to the public exigency. It is not yet successfully advocated that these greater areas be bought by drafts upon the public treasury; to be taken under the right of eminent domain (of course to be compensated for by public taxation or the issue of bonds) and to be thereafter policed by a corps of state officials for protection or development, also at the public expense.

The lumber interest is one of the most important interests of the state, employing vast capital and much labor, affording markets for our citizens and opening lands for settlement. Like every other interest it should receive proper encouragement and be properly restricted. It has seemed that the present practical solution of the forest problem would be reached by instilling a clearer conception of intelligent forest treatment into the minds and methods of forest owners,—with perhaps stringent legislative restrictions in the cutting of areas devoted to pulp wood,—seeking to have cut only matured or well developed trees, thus clearing the forest of

exuberant growth, and providing for its development and for the successive crops of timber, which will ensue with careful treatment, without limit of time. Our examinations and labors have been to this end and we confidently believe with marked success, so that a new era in cutting and consequent preservation has beyond doubt been inaugurated. Its continuance, however, cannot be indefinitely relied upon; for, since it depends upon the caprice or circumstances of individual owners, it is impossible to say what might happen if any marked change in present industrial conditions should set in.

8. The most serious problem now apparent is the devastation threatened by cutting indiscriminately to supply the pulp mills. While some owners and the contractors for the greater mills assert their intention to cut pulp timber for future crops, jobbers and buyers of stumpage are likely to make clean and devastating work. If we would protect from this new danger, restrictive legislation seems necessary to limit the size of the cut.

HON. NAPOLEON B. BRYANT.

We have elsewhere recorded the fact that during the present year the board has lost one of its original members by death. The Honorable Napoleon B. Bryant was a New Hampshire man, born in 1825. He was the maker and master of his own fortunes, attaining great eminence in the legal profession and distinction in political and public life, being a well known eloquent and effective advocate and speaker. Mr. Bryant was solicitor for Grafton county, member and speaker of the house of representatives and delegate to the Chicago convention nominating Lincoln in 1860. Commencing political life as a Democrat he joined the long dominant party in 1856. He practiced his profession in Grafton county, at the state capital, and with marked success in Boston. Always devoted to his state, after success came to him he beautified and extended his earlier estate at Andover. He was a cordial, genial friend, beloved of his earlier

and later associates. He made many valuable addresses upon forestry and was of much service to the commission and the public. He died in the harness, at the close of an earnest and remembered address, delivered by him to his neighbors and friends, late in the evening of January 28, 1902, and rests in the town of his nativity.

HENRY O. KENT,
GEORGE E. BALES,
MARSHALL C. WENTWORTH,
GEORGE H. MOSES,

Forestry Commissioners.

NEW HAMPSHIRE FORESTRY LAWS.

CHAPTER 44, LAWS OF 1893.

AN ACT FOR THE ESTABLISHMENT OF A FORESTRY COMMISSION.

Be it enacted by the senate and house of representatives in general court convened:

SECTION 1. There is hereby established a forestry commission, to consist of the governor, *ex officio*, and four other members, two Republicans and two Democrats, who shall be appointed by the governor, with the advice of the council, for their special fitness for service on this commission, and be classified in such manner that the office of one shall become vacant each year. One of said commissioners shall be elected by his associates secretary of the commission, and receive a salary of one thousand dollars per annum. The other members shall receive no compensation for their services, but shall be paid their necessary expenses incurred in the discharge of their duties, as audited and allowed by the governor and council.

SECT. 2. It shall be the duty of the forestry commission to investigate the extent and character of the original and secondary forests of the state, together with the amounts and varieties of the wood and timber growing therein; to ascertain, as near as the means at their command will allow, the annual removals of wood and timber therefrom, and the disposition made of the same by home consumption and manufacture, as well as by exportation in the log, the different methods of lumbering pursued, and the effects thereof upon the timber supply, water-power, scenery, and climate of the state; the approximate amount of revenue annually derived from the forests of the state; the damage done to them from

time to time by forest fires; and any other important facts relating to forest interests which may come to their knowledge. They shall also hold meetings from time to time in different parts of the state for the discussion of forestry subjects, and make an annual report to the governor and council, embracing such suggestions as to the commission seem important, fifteen hundred copies of which shall be printed by the state.

SECT. 3. The selectmen of towns in this state are hereby constituted fire wardens of their several towns, whose duty it shall be to watch the forests, and whenever a fire is observed therein to immediately summon such assistance as they may deem necessary, go at once to the scene of it, and, if possible, extinguish it. In regions where no town organizations exist, the county commissioners are empowered to appoint such fire wardens. Fire wardens and such persons as they may employ shall be paid for their services by the towns in which such fires occur, and in the absence of town organizations by the county.

SECT. 4. Whenever any person or persons shall supply the necessary funds therefor, so that no cost or expense shall accrue to the state, the forestry commission is hereby authorized to buy any tract of land and devote the same to the purposes of a public park. If they cannot agree with the owners thereof as to the price, they may condemn the same under the powers of eminent domain, and the value shall be determined as in the case of lands taken for highways, with the same rights of appeal and jury trial. On the payment of the value as finally determined, the land so taken shall be vested in the state, and forever held for the purposes of a public park. The persons furnishing the money to buy such land shall be at liberty to lay out such roads and paths on the land, and otherwise improve the same under the direction of the forestry commission, and the tract shall at all times be open to the use of the public.

SECT. 5. This act shall take effect upon its passage.

[Approved March 29, 1893.]

CHAPTER 110, LAWS OF 1895.

AN ACT FOR THE PROTECTION OF FORESTS FROM FIRE.

Be it enacted by the senate and house of representatives in general court convened:

SECTION 1. It shall be the duty of the forestry commission, upon application by the owner or owners of any tract of forest land, situated in a locality where no town organization exists, to appoint a suitable number of special fire wardens for said tract, to define their duties, to limit their term of employment, and to fix their compensation. The expense attending the employment of said special fire wardens shall be borne one half by the party or parties making the application for their appointment and one half by the county in which said tract of forest land is located.

[Approved March 29, 1895.]

CHAPTER 98, LAWS OF 1901.

AN ACT IN AMENDMENT OF CHAPTER 85, LAWS OF 1895,
RELATING TO THE PROTECTION AND PRESERVATION OF
ORNAMENTAL AND SHADE TREES IN THE HIGHWAYS.

Be it enacted by the senate and house of representatives in general court convened:

SECTION 1. Mayors of cities and selectmen of towns shall, immediately upon the passage of this act, and annually thereafter, appoint one or more tree wardens, who shall be discreet persons, resident of the city or town where appointed, interested in the planting, pruning, and preservation of shade and ornamental trees and public ways and grounds, whose business it shall be to perform the duties hereinafter specified, and shall be allowed such compensation for their services and expenses as the mayor or selectmen may deem reasonable.

SECT. 2. Towns and cities shall have control of all shade and ornamental trees situated in any public way or ground within their limits, which the tree warden deems reasonably necessary for the purpose of shade and ornamentation; and it shall be the duty of the tree wardens, as soon as possible after their appointment, to carefully examine the trees, situated as aforesaid, and to plainly mark such trees as they think should be controlled by their municipality, for the purposes aforesaid, by driving into each tree, at a point not less than three nor more than six feet from the ground, on the side toward the highway, a nail or spike, with the letters "N. H." cut or cast upon the head. Said spikes or nails shall be procured by the secretary of the forestry commission, and furnished by him to said officers as may be required by them for the purposes of this act, at a cost not to exceed five hundred dollars a year. If any of the nails or spikes shall be destroyed or defaced, it shall be the duty of the warden to renew them as soon as possible after he is informed or discovers that they have been removed. They shall also have the power to designate from time to time, in the same manner as hereinbefore directed, such other trees, within the limits of the public ways and grounds, as in his [their] judgment should be preserved for ornament or shade.

SECT. 3. If any of the trees designated as aforesaid should prove to be private property, and the owners thereof refuse to release or convey their interest therein to the municipality, the tree warden shall acquire them for the use of the city or town, by purchase, if it can be done at a fair price. Failing in this, he may, on petition for that purpose, acquire them in the same way and manner, with the same right of appeal to their owners as in the case of land taken for a highway.

SECT. 4. Towns and cities may annually appropriate money, not exceeding in the aggregate fifty cents for each of their ratable polls in the preceding year, to be used by the tree warden in planting, pruning, protecting, and, whenever necessary, acquiring, shade and ornamental trees within the limits of their public ways and grounds.

SECT. 5. Whoever desires the cutting or removal, in whole or in part, of any public shade or ornamental tree, may apply to the tree warden, who shall give a public hearing upon the application, at some suitable time and place, after duly publishing and posting notices of the hearing in two or more public places in town, and also upon the tree or trees which it is desired to cut and remove; provided, however, that the tree warden may, if he deems it expedient, grant permission for such cutting or removal without a hearing, if the tree or trees in question are on a public way outside of the residential part of the town limits, such residential part to be determined by the tree warden. No tree within such residential limit shall be cut by the tree warden except to trim it, or be removed by him, without a hearing as aforesaid, the decision of the tree warden shall be final.

SECT. 6. It shall be unlawful to cut, destroy, injure, deface, or break, any public shade or ornamental tree, or to affix to any such tree a play bill, picture, announcement, notice, advertisement, or other device or thing, whether in writing or otherwise, or to paint or mark such tree, except for the purpose of protecting it, and under a written permit from the tree warden, or to negligently or carelessly suffer any horse or other beast, driven or being lawfully in a public way or place, to break down, injure, or destroy a shade or ornamental tree within the limits of said public way or place, or to negligently or willfully, by any other means, break down or injure any such tree.

SECT. 7. Owners of land abutting on the highways, and all other persons, are hereby prohibited from burning brush within or beside highways without first removing the brush such distance from the trees within the highway as not to endanger or injure them in any manner.

SECT. 8. Persons violating any of the provisions of this act shall forfeit not less than five nor more than one hundred dollars, to be recovered in an action of debt by the tree warden or any other person for the benefit of the town or city in which the tree is situated, or be fined not less than five nor more than one hundred dollars.

SECT. 9. All acts and parts of acts inconsistent with this act are hereby repealed, and this act shall take effect upon its passage.

[Approved March 22, 1901.]

PROVISIONS OF THE PUBLIC STATUTES RELATING TO FOREST FIRES.

If any person shall kindle a fire by the use of firearms, or by any other means, on land not his own, he shall be fined not exceeding ten dollars; and if such fire spreads and does any damage to the property of others, he shall be fined not exceeding one thousand dollars.—Chapter 277, section 4.

If any person, for a lawful purpose, shall kindle a fire upon his own land, or upon land which he occupies, or upon which he is laboring, at an unsuitable time, or in a careless and imprudent manner, and shall thereby injure or destroy the property of others, he shall be fined not exceeding one thousand dollars.—Chapter 277, section 5.

Whoever shall inform the prosecuting officers of the state of evidence which secures the conviction of any person who willfully, maliciously, or through criminal carelessness has caused any damage by fire in any forest, wood lot, pasture or field, shall receive from the state a reward of one hundred dollars. The state treasurer shall pay the same to the informer upon presentation of a certificate of the attorney-general or solicitor that he is entitled thereto.—Chapter 277, section 7.

FOURTH BIENNIAL REPORT

of the

NEW HAMPSHIRE

State Board of Charities
and Correction

FOR THE BIENNIAL PERIOD ENDING
SEPTEMBER 30, 1902.



VOLUME I = = PART IV.

PRINTED BY IRA C. EVANS CO., CONCORD.
BOUND BY RUMFORD PRINTING CO., CONCORD.

TABLE OF CONTENTS.

	Page.
Letter of Transmittal	5
Officers and Committees	6
Complete list of members and officers since beginning	7
Summary of recommendations to legislature	8
Laws relating to Board of Charities and Correction	10
Information about Board of Charities and Correction	19
Table I. Dates of meetings and attendance	25
Table II. Institutions visited by Board, with dates	26
Table III. Expenses of Board since beginning	30
General Report	31
Table IV. Children fifteen years and under dependent upon public funds for support	42
Dependent Children	43
Table V. Children in Orphans' Homes	49
State beneficiaries, deaf mutes and the blind	52
State School for the Feeble-minded	53
Table VI. Showing number of feeble-minded in almshouses	54
Table VII. Showing almshouse population October 1, 1901	56
Table VIII. Showing almshouse population October 1, 1902	57
Almshouses	58
Table IX. Showing number of prisoners committed to county houses of correction from October 1, 1900, to October 1, 1901	61
Table X. Showing number of prisoners committed to county houses of correction from October 1, 1901, to October 1, 1902	62
County Houses of Correction	63

Table XI. Number of prisoners in county jails	
October 1, 1902	65
Table XII. Showing expense of county jails from	
January 1, 1901, to January 1, 1902	66
County Jails	66
Table XIII. Summary of outdoor relief, 1901	68
Table XIV. Summary of outdoor relief, 1902	69
State Industrial School	70
The Insane	73
Conclusion	75
Special reports on each Orphans' Home	76-100
Special reports on the institutions where the deaf, dumb, and blind state beneficiaries are educated	100-105
The Soldiers' Home	105
The Woman's Aid Home	107
The Mercy Home	109
Special reports on each Almshouse	111-134
Special reports on each Jail	135-142
List of Volunteer Visitors	143
List of Homes, Hospitals, and other Charitable Associa- tions in the State	146
By-laws of the Board	149
Forms and Blanks used	151-159

APPENDIX.

Tables giving town outdoor relief in detail, 1901	162-174
Tables giving town outdoor relief in detail, 1902	175-187

STATE OF NEW HAMPSHIRE.

OFFICE OF THE STATE BOARD OF CHARITIES,
CORNER MAIN AND PARK STREETS.

To His Excellency the Governor and the Honorable Council and Legislature:

In accordance with the provisions of section 8, chapter 116 of the Public Statutes, the State Board of Charities and Correction has the honor to present herewith the biennial report for the period ending September 30, 1902. .

Respectfully submitted,

LILIAN C. STREETER,
Chairman.

Attest,

WILLIAM J. AHERN,
Secretary.

STATE BOARD OF CHARITIES AND CORRECTION

OFFICE CORNER MAIN AND PARK STREETS, CONCORD, N. H.

MEMBERS.

SHERMAN E. BURROUGHS,	Manchester,	Term expires July 9, 1906
ELLA L. FOLLANSBY,	Exeter,	Term expires July 9, 1907
JAMES F. BRENNAN,	Peterborough,	Term expires June 13, 1903
LILIAN C. STREETER,	Concord,	Term expires Aug. 29, 1904
OLIVER J. M. GILMAN,	Alton,	Term expires July 8, 1905

IRVING A. WATSON, M. D., *ex officio*, Secretary State Board of Health.

OFFICERS, 1901-1902.

LILIAN C. STREETER	Chairman
WILLIAM J. AHERN	Secretary

STANDING COMMITTEES.

Almshouses	MR. GILMAN and MRS. FOLLANSBY.
Jails, Reformatories, and Houses of Correction	MR. BURROUGHS and MRS. STREETER.
Orphans' Homes	MRS. FOLLANSBY and MR. BRENNAN.
Dependent Children	MRS. STREETER and MR. BRENNAN.
State Beneficiaries	MR. BRENNAN and MR. GILMAN.

VISITING COMMITTEES, COUNTY FARMS AND JAILS.

1900-1901.

Belknap and Grafton	MR. GILMAN.
Coös and Merrimack	MRS. STREETER.
Carroll and Strafford	MRS. FOLLANSBY.
Cheshire and Hillsborough	MR. BRANCH.
Rockingham, Sullivan and Hillsborough	MR. BRENNAN.

VISITING COMMITTEES, COUNTY FARMS AND JAILS.

1901-1902.

Grafton, Cheshire, Rockingham and Sullivan	MRS. FOLLANSBY.
Belknap, Strafford, Rockingham and Coös	MR. GILMAN.
Merrimack, Coös, Hillsborough and Carroll	MRS. STREETER.
Hillsborough, Belknap, Merrimack and Grafton	MR. BURROUGHS.
Cheshire, Carroll, Sullivan and Strafford	MR. BRENNAN.

Complete list of members of State Board of Charities and Correction from July 9, 1895, to September 30, 1902.

Appointed.	NAME.	Address.	Term expires.	Remarks.
July 9, 1895	Oliver J. M. Gilman.....	Alton.....	July 8, 1900	
July 9, 1895	Julia R. Carpenter.....	Concord.....	July 8, 1899	
July 9, 1895	John M. Mitchell.....	Concord.....	July 8, 1898	Resigned December 22, 1896.
July 9, 1895	Melusina H. Varick.....	Manchester.....	July 8, 1897	
July 9, 1895	George G. Davis.....	Marlborough.....	July 8, 1896	
Dec. 23, 1896	George G. Davis.....	Dover.....	July 27, 1901	Resigned November 22, 1897.
	John Kivel.....	Dover.....	July 8, 1898	Appointed to fill out Mr. Mitchell's term.
June 29, 1897	Melusina H. Varick.....	Manchester.....	June 28, 1902	Resigned March 21, 1899.
Jan. 13, 1898	John M. Whipple.....	Claremont.....	July 27, 1901	Appointed to fill out Mr. Davis's term.
June 14, 1898	John Kivel.....	Dover.....	June 14, 1903	Resigned March 21, 1899.
March 31, 1899	Ella L. Follansby.....	Exeter.....	June 28, 1902	Resigned October 9, 1899.
April 21, 1899	Edward J. Burnham.....	Manchester.....	July 28, 1901	Appointed to fill out Mrs. Varick's term.
Aug. 30, 1899	Julia R. Carpenter.....	Concord.....	Aug. 29, 1904	Appointed to fill out J. M. Whipple's term. Resigned October 5, 1899.
Oct. 27, 1899	Lilian C. Streeter.....	Concord.....	Aug. 29, 1904	Declined reappointment.
Oct. 27, 1899	James F. Brennan.....	Peterborough.....	June 13, 1903	To succeed Mrs. J. R. Carpenter.
July 9, 1900	O. J. M. Gilman.....	Alton.....	July 8, 1905	To succeed John Kivel.
Nov. 22, 1900	Oliver E. Branch.....	Manchester.....	July 28, 1901	
Aug. 28, 1901	Sherman E. Burroughs.....	Manchester.....	July 9, 1906	To succeed E. J. Burnham.
July 9, 1902	Ella L. Follansby.....	Exeter.....	July 9, 1907	To succeed O. E. Branch.

Ex officio, by act of legislature, 1897, Irving A. Watson, M. D. Secretary State Board of Health and Commissioner of Lunacy.

OFFICERS OF BOARD SINCE THE BEGINNING.

CHAIRMEN.

JOHN M. MITCHELL, From July 27, 1895, to Dec. 22, 1896. | EDWARD J. BURNHAM,
 GEORGE G. DAVIS, From Dec. 31, 1896, to Sept. 29, 1897. | JAMES F. BRENNAN,
 JOHN KIVEL, From Sept. 29, 1897, to Oct. 9, 1899. | LILIAN C. STREETER,

SECRETARIES.

JULIA R. CARPENTER, From July 27, 1895, to March 9, 1896. | LILIAN C. STREETER,
 OLIVER J. M. GILMAN, From March 9, 1896, to Nov. 21, 1900. | WILLIAM J. AHERN,

From Nov. 15, 1899, to Oct. 5, 1900.
 From Nov. 21, 1900, to May 30, 1901.
 From May 30, 1901, to ———

From Nov. 21, 1900, to May 30, 1901.
 From June 15, 1901, to ———

SUMMARY OF RECOMMENDATIONS

OF THE

STATE BOARD OF CHARITIES AND CORRECTION TO THE LEGISLATURE.

1. Amend chapter 102, Laws of 1901, so that the New Hampshire School for the Feeble-minded shall give custodial care to adult feeble-minded women, as well as educational care to feeble-minded children. (See pages 53, 54.)

2. So amend section 1, chapter 86, Public Statutes, providing for the education of indigent deaf, dumb, and blind persons, that no indigent deaf, dumb, or blind child in the state shall be deprived of an education for want of funds. (See page 52.)

3. The State Board of Charities and Correction recommends the passage of a resolution by the legislature at the forthcoming session, declaring that on and after a fixed date (*e. g.* January 1, 1907) the state of New Hampshire shall assume entire support, control, and management of its dependent insane. (See pages 73, 74.)

4. Also amend section 8, chapter 91, Laws of 1897, by striking out the phrase "except the state prison and the asylum for the insane at Concord," so that the section shall read:

"SECT. 8. It shall be the duty of the board to inspect all state and county charitable or correctional institutions, and report to the governor and council and legislature biennially the result of their inspection, with a recommendation for such

changes in existing laws as in their judgment the public good requires; and shall, on making such inspection, report and recommend to the county commissioners, or such other county or state officers as have the control and management of such institutions, the changes, if any, that said boards find on such inspection should be made in said institutions." (See page 24.)

5. The State Board of Charities and Correction recommends the passage of an amendment to section 1, chapter 265, Public Statutes, making it a penal offense for any man without good cause wilfully to desert, neglect, or refuse to support his child or children fifteen years of age or under. (See page 47.)

LAWS RELATING TO STATE BOARD OF CHARITIES AND CORRECTION.

(Laws of 1895, Chap. 116, Sect. 4.) The governor and council shall appoint five persons to serve as a State Board of Charities and Correction, whose duty it shall be to see that the provisions of this act are faithfully carried out, and that said minor children receive suitable education, training, and support. They shall first be appointed for one, two, three, four, and five years, and afterwards for five years as vacancies arise, and shall receive no compensation except expenses incurred.

(Laws of 1895, Chap. 116, Sect. 5.) Any overseer of the poor or county commissioner who shall unreasonably neglect to comply with the requirements of this act shall be removed from office by the superior court, or a justice thereof, upon the petition of the State Board of Charities, upon proof thereof being made, and after hearing upon said petition.

(Laws of 1895, Chap. 116, Sect. 6.) Overseers of the poor and county commissioners shall report to the State Board of Charities all minors cared for by them under this act, with copies of the contracts made, and such other information as may be required by such board; and such Board of Charities shall report annually to the governor and council to such an extent as may be required.

(Laws of 1895, Chap. 116, Sect. 7, as amended by Laws of 1901, Chap. 50, Sect. 1.) The reasonable expenses of said State Board of Charities shall be paid by the governor and council out of any funds in the treasury not otherwise appropriated [and the said State Board of Charities shall be

authorized to appoint a secretary from outside its membership, who, under the direction of the board, shall give his entire time to the duties of the board, act as visiting agent to the placed-out children, and supervisor of volunteer visitors, and perform such other duties, under the direction of the board, as may rightfully belong to his office. The salary of the secretary and a clerk may be fixed by the board, but in the aggregate shall not exceed two thousand dollars per annum].*

(Laws of 1897, Chap. 91, Sect. 8.) It shall be the duty of the board to inspect all state and county charitable or correctional institutions, except the state prison and the asylum for insane at Concord, and report to the governor and council and legislature biennially the result of their inspection, with a recommendation for such changes in existing laws as in their judgment the public good requires; and shall, on making such inspection, report and recommend to the county commissioners, or such other county or state officers as have the control and management of such institutions, the changes, if any, that said boards find on such inspection should be made in said institutions.

(Laws of 1897, Chap. 91, Sect. 9.) The secretary of the state board of health shall be, *ex officio*, member of the State Board of Charities and Correction; and shall, when requested by the board, give advice and perform service without additional compensation except expenses incurred.

(Laws of 1897, Chap. 91, Sect. 10.) They may give any minor under their care to any suitable person, to be adopted by such person, whenever such adoption is for the best interests of said minor, providing it shall appear, upon a hearing upon the petition of such person to the probate court for leave to adopt such child, that its parents have abandoned the same, or that they are unknown, and in such case notice of the proceedings may be given by publication, and no consent of the parents or others shall be required in order to legally adopt said child.

* Added by Chap. 50, Sect. 1, Laws of 1901.

SUPPORT OF DEPENDENT MINOR CHILDREN.

(Laws of 1895, Chap. 116, Sect. 1.) No minor between the ages of three and fifteen years shall be supported at any county almshouse in this state for more than sixty days, unless the consent of the Board of Charities shall have been obtained, excepting such as are under serious physical disability or are mentally incapacitated for education, or are under sentence for crime; and it shall be the duty of the commissioners of the various counties to find suitable homes for such minor children within said period of sixty days. On and after the expiration of said sixty days, if suitable homes have not been provided said minors, other than said county almshouse, the State Board of Charities shall have full control over said minor children, and shall be charged with the duty of procuring permanent homes for said minors, as a board or through such agent as said board may appoint, whenever it shall appear to them that the welfare of the minor will be promoted thereby, at the expense of the county to which such minor is chargeable, the compensation to be the same as is allowed the county commissioners.*

(Laws of 1897, Chap. 91, Sect. 2.) It shall be the duty of the overseers of the poor of towns and cities liable for the support of such minors, and of the county commissioners of counties liable for such support, to procure such minors supported at some orphan asylum or home or with some private family or families of good repute.

(Laws of 1897, Chap. 91, Sect. 3.) It shall be the duty of overseers of the poor and county commissioners, as soon as practicable, to find permanent homes for all such orphan minors, and make contracts for their education and support during minority, and all such contracts shall be subject to rescission by the State Board of Charities, whenever the interest of such minors shall make it necessary, and said Board of Charities shall have the same authority, in respect to the control of all children for whom they provide permanent homes, as is now vested in overseers of the poor and county commissioners.

* Substituted for original section by the Laws of 1897, chapter 91.

(Laws of 1893, Chap. 61, Sect. 1.) The overseers of the poor in any town, or the county commissioners of any county, may send to the New Hampshire Orphans' Home, or to any orphans' home in this state, or other institution devoted to or suitable for the care, protection, and education of children, upon such terms as may be agreed upon, all children residing in their respective towns or counties who are not employed in some lawful business, and whose parents are unable or neglect to maintain them; but, in the selection of such home or institution, said overseers and commissioners shall give the preference to that home or institution that is conducted by or under the auspices of the church or religious denomination of which that child or the child's parents are members; and said home or institution shall thereupon have the same authority in respect to such children as is now vested in overseers of the poor and county commissioners.

STATE AID TO INDIGENT DEAF AND DUMB, BLIND, AND
FEEBLE-MINDED PERSONS.

(Public Statutes of 1891, Chap. 86, Sect. 1.) Sums of money are annually appropriated for the support and education of indigent deaf and dumb and blind persons, and indigent feeble-minded children of this state, as follows: Five thousand dollars for indigent deaf and dumb persons, four thousand dollars for the indigent blind persons, and one thousand dollars for indigent feeble-minded children.

(Public Statutes of 1891, Chap. 86, Sect. 2.) Upon the recommendation of the State Board of Charities and Correction* assistance shall be furnished to such persons, in such amounts, and at such asylums, schools, or other institutions designed for the purpose, as the governor and council shall direct.

(Public Statutes of 1891, Chap. 86, Sect. 3.) The furnishing of such assistance shall not affect the settlement of any person nor his right to vote.

*The first eleven words of this section were added by the Laws of 1899, chapter 99.

ANNUAL REPORTS OF COUNTY COMMISSIONERS AND
OVERSEERS OF THE POOR.

(Public Statutes of 1891, Chap. 30.) SECTION 1. The sheriff, the jailer, the physician, the clerk of court, the solicitor, the treasurer, the county commissioners, and the superintendent of the county farm of each county, shall make up their several reports to December thirty-first annually, and the same shall be printed together in pamphlet form in the month of January following. The county commissioners shall forward one copy of said pamphlet to the town clerk of each town in the county, to be placed on file, and twenty copies to the secretary of state. The secretary of state shall cause such copies to be suitably bound, and shall send one of the bound volumes to each board of county commissioners, and deposit the others in the state library.

SECT. 2. The reports of the several officers named in the preceding section shall contain a summarized account of all their transactions which concern the county, for the current year ending as aforesaid [and shall be prepared in a uniform manner alike in each county, so that accurate statistics can be compiled from them, to wit: Total cost of maintaining a county farm; total amount of outdoor relief given; number and list of the paupers maintained at the farm, including number and list of insane, also the number and list of feeble-minded; and the number and list of prisoners, together with the cost per capita per week at the county farms, computed by the same method in each county; number and list of people helped outside the farm, and the towns in which they reside; and said county commissioners shall return such statistics to the State Board of Charities on or before the first day of October in each year, on blanks furnished by the board].*

(Public Statutes of 1891, Chap. 43, Sect. 12.) The selectmen shall cause their report and those of the treasurer, auditors, school boards, town clerk relative to vital statistics, and of other town officers required by law to make reports, to be

*Substituted for part of original section by Chap. 26, Sect. 1, Laws of 1901.

seasonably published in pamphlet form at the expense of the town and distributed among the voters at or before the annual meeting [and overseers of the poor shall keep full and accurate records of the paupers fully supported, the persons relieved and partially supported, and the travelers and vagrants lodged at the expense of their respective towns, together with the amount paid by them for such support and relief, and said overseers shall make an annual return of the number of said persons supported and relieved, with the cost of such support and relief, to the State Board of Charities on or before the first day of October in each year, on blanks furnished by said board].*

AN ACT TO PROVIDE FOR THE CARE AND EDUCATION
OF FEEBLE-MINDED CHILDREN.

*Be it enacted by the Senate and House of Representatives
in General Court convened:*

SECTION 1. The state shall establish and maintain a school for the care and education of the idiotic and feeble-minded, between three and twenty-one years of age, which shall be known as the New Hampshire School for the Feeble-minded Children. All children supported by towns or counties in the state, who in the judgment of the selectmen of towns or county commissioners of the county or State Board of Charities are capable of being benefited by school instruction, shall be committed to this institution.

SECT. 2. The governor shall, with the advice and consent of the council, appoint five persons, one of whom shall be a woman, to be trustees of such school, who shall serve without compensation, except that they shall be reimbursed for any necessary expenses they may incur in the discharge of their duties as trustees. The trustees shall be appointed as follows: The first three to serve for two years, the next two for four years, and thereafter trustees shall be appointed to serve four years. Said trustees shall have the general management and supervision of said school, and one or more of said trustees shall visit the school as often as once a month, and said

*Added by Chap. 26, Sect. 2, Laws of 1901.

board of trustees shall annually, on or before the first day of October of each year, furnish a report to the governor and council, containing a history of the school for the year and a complete statement of the accounts with all the funds, general and special, appropriated or belonging to said school, with a detailed statement of disbursements.

SECT. 3. The governor shall be, *ex officio*, a member of the board of trustees of said school and shall annually visit and inspect the same.

SECT. 4. All indigent and destitute children in this state who are proper subjects for said school, and who have no parents, kinsmen, friends, or guardians able to provide for them, may be admitted as state charges, and all other children in this state who are proper subjects for said school whose parents or other kinsmen bound by law to support such children are able to pay, shall pay such sum for care, education, and maintenance of such children as the trustees may hereafter determine; and such children and children from other states not having similar schools may be received into said school whenever there is room for them, providing there is room for them without excluding state charges, at a cost to such persons or those who are responsible for their maintenance of not less than three dollars and twenty-five cents per week.

SECT. 5. Whenever it is made to appear upon application to the judge of probate for any county, and after a proper hearing, that any child resident within said county, and who is not already in any almshouse, the Industrial School, or the New Hampshire Hospital, or supported by any town or county, is a fit subject for the New Hampshire School for Feeble-minded Children, such judge may commit such child to said New Hampshire School for Feeble-minded Children by an order of commitment directed to the trustees thereof, accompanied by the certificate of two physicians who are graduates of some legally organized medical college and have practiced three years in this state that such child is a suitable subject for said institution. Whenever, upon such application, there

is occasion for the judge of probate to attend a hearing on days other than those fixed by statute as the regular days for the sitting of the probate court he shall be allowed five dollars a day for his services and his expenses, which shall be paid by the county treasurer upon the certificate of the county commissioners.

SECT. 6. Any order of committal under this act shall be subject to appeal in the same manner, by the same persons, and to the same extent that decrees of the judge of probate appointing guardians over persons alleged to be insane are subject to appeal, and no commitment under this act shall bar *habeas corpus* proceedings, but the court upon *habeas corpus* proceedings may confirm the order of commitment whenever justice requires. Any inmate of the New Hampshire School for Feeble-minded Children may be discharged by any three of the trustees, or by a justice of the superior or supreme court, whenever a further detention at the school is, in their opinion, unnecessary; but any person so discharged who was under sentence of imprisonment at the time of his commitment, the period of which shall not have expired, shall be remanded to prison.

SECT. 7. Feeble-minded children shall be admitted to the institution in the following order: First, feeble-minded children now in public institutions supported entirely at public expense; second, the feeble-minded children not supported as aforesaid; third, the feeble-minded children of the state not in any public institution, who have no parents, kinsmen, or guardian able to provide for them, or who are committed by a judge of probate; fourth, those residing within the state whose parents, kinsmen, or guardian bound by law to support such children are able to pay; fifth, children of other states whose parents or guardians are able and willing to pay.

SECT. 8. The board of trustees, as soon as appointed and organized, shall proceed as soon as practicable to purchase a suitable site for said school and home, and erect thereon and properly furnish and equip suitable buildings and structures, to accomplish the objects set forth in this act.

SECT. 9. Said trustees shall have power to make all necessary rules and regulations as to admission to the institution and for the government and control of said institution and its inmates, and to do everything that is necessary to properly care for and educate the feeble-minded children of the state. All bills contracted by them in purchasing a site, erecting, repairing, and equipping suitable buildings and operating the institution for the next two years shall be audited by the auditor of the state treasurer's accounts, and the governor shall draw his warrant upon any money in the treasury to pay the same.

SECT. 10. A sum of money not exceeding thirty thousand dollars shall be appropriated under this act, to be used or expended for the purposes named therein within the next two years.

SECT. 11. All acts and parts of acts inconsistent with this act are hereby repealed, and this act shall take effect on its passage.

[Approved March 22, 1901.]

INFORMATION ABOUT STATE BOARD OF CHARITIES AND CORRECTION.

COMPOSITION AND DUTIES.

The State Board of Charities and Correction of New Hampshire was authorized by an act of the legislature, passed in March, 1895, a copy of which is prefixed, and consists of five members, three men and two women, appointed by the governor and council. The first members were appointed in July, 1895, for terms of one, two, three, four, and five years each. Since that time, as vacancies arise, members are appointed for terms of five years each. They serve without compensation except for expenses incurred.

The secretary of the State Board of Health is, *ex officio*, a member of the State Board of Charities and Correction, and when requested by the board gives advice and performs services without compensation except for expenses incurred.

In March, 1901, the legislature acting upon the recommendation of the State Board of Charities amended section 7, chapter 116, of the laws of 1895, by providing that a secretary should be appointed from outside the membership of the board who should, under the direction of the board, give his entire time to the duties of the office, act as visiting agent to the placed-out children, and supervisor of volunteer visitors, and perform such other duties as might rightfully belong to his office, and that the sum of two thousand dollars annually might be granted the board for salary of such a secretary and a clerk as assistant. Under this law it is now possible to visit all the state and county institutions much oftener than heretofore, and to keep in much closer touch with them, as well as with the children placed out in homes.

From July, 1895, until March, 1900, the board had no regular office but met by courtesy at the office of the Adjutant-General in the State House, and all its records, papers, and books were kept in Alton, N. H., at the home of the secretary, Mr. Gilman.

In March, 1900, the court granted the board an office in the State Library building, next the supreme court room, where the work was carried on and all records filed until June, 1901, when the court was obliged to use this room, and the state then rented two pleasant rooms for a permanent office for the board in Opera House Block, Park street, opposite the State House.

The by-laws of the board, adopted in September, 1899, provide for meetings on the third Wednesdays of alternate months beginning with January, and for special meetings at the call of the president, secretary, or any three members of the board.

Analyzing the statute under which the Board of Charities and Correction works, we find that section 1 states that "No minor between the ages of three and fifteen years shall be supported at any county almshouse in this state for more than sixty days, unless the consent of the Board of Charities shall have been obtained, excepting such as are under serious physical disability, or are mentally incapacitated for education, or are under sentence for crime." Section 3 provides that overseers of the poor and county commissioners shall find permanent homes for such orphan minors, and make contracts for their education and support during minority, subject to rescission by the State Board of Charities whenever the interests of such minors shall make it necessary, and further states that "said Board of Charities shall have the same authority in respect to the control of all children for whom they provide permanent homes as is now vested in overseers of the poor and county commissioners." Section 4 provides for the appointment, by the governor and council, of five persons to serve as a State Board of Charities and Correction, "whose duty it shall be to see that the provisions of this act

are faithfully carried out, and that said minor children receive suitable education, training, and support." The care of the dependent children of the state is thus the main duty of the board. But under section 8 it is also expected "to inspect all state and county charitable and correctional institutions, except the state prison and the asylum for the insane at Concord, and report to the governor and council and legislature biennially the result of their inspection, with a recommendation for such changes in existing laws as in their judgment the public good requires; and shall, on making such inspection, report and recommend to the county commissioners, or such other county or state officers as have the control and management of such institutions, the changes, if any, that said boards find on such inspection should be made in said institutions."

The board is therefore seen to be chiefly supervisory and advisory, with very little absolute power. The dependent children of the state are primarily under the direct care of the county commissioners (thirty in number, three for each of the ten counties in the state), or of the overseers of the poor of the towns or cities where they have their settlement. It is the duty of these county commissioners and overseers of the poor to remove the children from the almshouses, and place them in homes, or place them directly in homes without previous detention in almshouses, if need be; and it is the duty of the State Board of Charities to see that this is done, and that the homes provided are suitable.

Under section 5, if the overseers of the poor or county commissioners "shall unreasonably neglect to comply with the requirements of this act, they shall be removed from office by the superior court or a justice thereof, upon the petition of the State Board of Charities, upon proof thereof being made and after hearing upon said petition."

In the practical workings of this law relating to children many difficulties arise from the fact that the state board has no absolute power over the children. If all the dependent children of the state could be given directly into the hands of

the State Board of Charities with absolute powers as to their disposition, it would take a great burden from the shoulders of the county commissioners, and make it possible to care for and place out the children in a much more systematic and satisfactory manner to all parties concerned.

Two years previous to the passage of this law of 1895, a law was passed *permitting* the county commissioners or overseers of the poor to remove the children from almshouses, and put them in orphans' homes or families, but as this action was not made obligatory, no notice was taken of it, and the law was practically inoperative. This is the only legislation enacted in New Hampshire for the benefit of dependent children previous to the law of 1895.

But provision was made for the education of defective children very early in the century. In 1819, a committee was appointed by the legislature to inquire into the number of indigent deaf mutes in the state, and recommend measures for their relief, and the legislature of 1821, acting upon the report of the committee recommended an appropriation of \$1,000, "for the education of indigent deaf and dumb children at the Asylum in Hartford, Connecticut." A similar appropriation was made each year thereafter until the legislature of 1833 increased this appropriation to \$1,500, and also appropriated \$500 for the education of the blind, the first mention of any provision for this class of defectives. From this time until 1879, each successive legislature made a special appropriation for the education of the deaf, dumb, and blind, varying the amount from year to year, but gradually increasing until in 1873, \$4,000 was appropriated for the deaf and \$3,000 for the blind. But it was not until 1879 that a law was passed making a standing appropriation of \$10,000 annually for the support in schools outside the state of indigent deaf and dumb, blind, and feeble-minded children, apportioned as follows:

Five thousand dollars for the deaf and dumb, \$4,000 for the blind, and \$1,000 for the feeble-minded. The children are appointed to these schools by the governor and council, and

since 1899 the appointments are made only upon recommendation of the State Board of Charities. It is also the duty of the board to visit these state beneficiaries and report upon them to the governor and council. Previous to 1899 they were under no supervision. Until 1901 there was no provision within the state for the education of any of these defectives; but the legislature of 1901, acting upon the recommendation of the State Board of Charities, passed a law providing for the establishment and maintenance of a school for the care and education of the idiotic and feeble-minded, to be known as the New Hampshire School for Feeble-minded Children, and appropriated thirty thousand dollars (\$30,000) for this purpose. The full text of the law will be found on pages 15-18. The school will be opened about January first, and under section eight of the law of 1895 will be subject to the supervision and inspection of the State Board of Charities.

The legislature of 1901 also acted favorably upon the recommendations of the State Board of Charities, providing for the returns to the board of full and complete statistics from all towns and cities of all "out-door" relief given, the number of persons relieved and amounts given, and that the reports of the ten counties should be rendered in a uniform manner, alike in each county, so that accurate statistics might be compiled from them. (Vid. full text of law, pages 14-15.) While the passage of these laws places increased labors and responsibilities upon town and county officials, as well as greatly adding to the burden of the small office force of the Board of Charities in the immense amount of time and work involved in tabulating the returns, the results are of inestimable value to the state, a value which will increase immeasurably from year to year as opportunities for comparison develop, and results of scientific research and treatment become apparent. One of the most important duties of the State Board of Charities and Correction, and its most valuable service to the state, is the collation and tabulation of these statistics.

The New Hampshire state prison and state hospital are expressly excepted by statute from the institutions to be visited and inspected by the State Board of Charities and Correction. Out of seventeen states having a State Board of Charities and Correction, or State Board of Control, New Hampshire is the only one excepting such institutions from the supervision of the board. In point of fact, the board occasionally visits both state prison and state hospital in New Hampshire by express request and courtesy of warden and superintendent, which they deeply appreciate, but they cannot, of course, under the present law render any report of such visits.

The number of visits that the Board of Charities shall make to state and county institutions is not prescribed by the statute, but the effort is made to keep in constant touch with them, so that there may be at all times at the office of the board exact knowledge of prevailing conditions at all institutions. Since the salaried secretary began his work under the law of March, 1901, all institutions have been visited by him as often as three times yearly, in addition to the visits from members of the board. An exact list of all visits made can be found in the Table of Institutions visited, page 26, and reports of all visits are on file at the office of the board.

Since April, 1900, all bills of expenses of members have been presented regularly at the January and July meetings of the board, and recorded by the secretary before being presented to the state treasurer. A table showing the expenses of the board from the beginning to the date of this report will be found on page 30.

TABLE I.

Attendance of members upon meetings of the Board held from December 1, 1900, to September 30, 1902.

MEMBERS.	YEARS OF SERVICE.	Meeting Dec. 10, 1900.	Meeting Jan. 16, 1901.	Meeting March 20, 1901.	Meeting May 25, 1901.	Adjourned meeting May 30, 1901.	Meeting July 9, 1901.	Meeting Sept. 28, 1901.	Meeting Nov. 20, 1901.	Meeting Jan. 23, 1902.	Meeting May 19, 1902.	Meeting July 9, 1902.	Meeting Sept. 17, 1902.
Oliver J. M. Gilman.....	From July 9, 1895.....	A	P	P	P	P	P	P	P	A	P	P	P
Ella L. Follansby.....	From March 31, 1899.....	P	P	P	P	P	P	P	P	A	P	P	P
James F. Brennan.....	From Oct. 27, 1899.....	P	P	P	P	P	P	P	P	P	P	A	P
Lillian C. Streeter.....	From Oct. 27, 1899.....	P	P	P	P	P	P	P	P	P	P	P	P
Oliver E. Branch.....	From Nov. 22, 1900, to July 28, 1901	P	A	A	P	P	A*	.....	.....	.....	.....	.....	.....
Sherman E. Burroughs....	From Aug. 28, 1901.....	.....	.....	.....	.....	.....	.....	A	A	P	A	A	P
I. A. Watson, M. D.....	<i>Ex officio</i>	P	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Resigned July 28, 1901.

TABLE II.

Institutions visited by the Board and Secretary during biennial period, with dates of visits.

DECEMBER 1, 1900, TO DECEMBER 1, 1901.							DECEMBER 1, 1901, TO SEPTEMBER 30, 1902.						
	Gilman.	Brennan.	Branch.	Follansby.	Streeter.	Ahern.		Gilman.	Brennan.	Follansby.	Streeter.	Ahern.	Burrongs.
Belknap County Farm.....	Apr. 17	.....	.....	.....	.....	Aug. 20	.....	.....	.....	.....	Jan. 10	Jan. 10	.....
Belknap County Jail.....	Apr. 17	.....	.....	.....	.....	Aug. 22	.....	Apr. 23	.....	.....	Jan. 10	Jan. 10	.....
Carroll County Farm.....	Apr. 23	.....	.....	.....	May 9	.....
Carroll County Jail.....	July 30	.....	.....	.....	.....	.....	May 9	.....
Cheshire County Farm.....	Aug. 2	.....	.....	.....	.....	.....	July 3	.....
Cheshire County Jail.....
Coos County Farm.....	July 16	.....	.....	.....	.....	.....	.....	.....
Coos County Jail.....	July 17	.....	.....	.....	.....	Sept. 9, 10	July 17	.....
.....	Oct. 28	.....	.....	.....	.....	.....	.....	.....
Grafton County Farm.....	July 15	.....	.....	.....	.....	.....	.....	.....
.....	Oct. 23	.....	.....	.....	.....	.....	.....	.....
Grafton County Jail.....	Oct. 23	.....	.....	.....	.....	.....	.....	.....
Hillsborough County Farm.....	Sept. 28	.....	Sept. 26	.....	June 25	.....	.....	.....	.....	.....	.....	.....
.....
Hillsborough County Jail.....	Oct. 3	.....	.....	.....	.....	.....	.....	.....
Merrimack County Farm.....	July 23	.....	.....	.....	.....	.....	.....	.....
.....	Aug. 12	.....	.....	.....	.....	.....	.....	.....
.....	Sept. 24	.....	.....	.....	.....	.....	.....	.....
.....	Nov. 16	.....	.....	.....	.....	.....	.....	.....
.....	Sept. 27	.....	.....	.....	.....	.....	.....	.....
Merrimack County Jail.....
Rockingham County Farm.....	July 3	.....	.....	.....	.....	.....	.....	.....
Rockingham County Jail.....	Aug. 23	.....	.....	.....	.....	.....	.....	.....
Strafford County Farm.....	July 27	.....	.....	.....	.....	.....	.....	.....
Strafford County Jail.....	Aug. 17	.....	.....	.....	.....	.....	.....	.....
Sullivan County Farm.....	July 13	.....	.....	.....	.....	.....	.....	.....
Sullivan County Jail.....	Dec. 9	.....	.....	.....	.....	.....	.....	.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....		

[illegible]

TABLE II. — Continued.

Institutions visited by the Board and Secretary during biennial period, with dates of visits.

	DECEMBER 1, 1900, TO DECEMBER 1, 1901.					DECEMBER 1, 1901, TO SEPTEMBER 30, 1902.						
	Gilman.	Brennan.	Branch.	Follansby.	Streeter.	Ahern.	Gilman.	Brennan.	Follansby.	Streeter.	Ahern.	Burroughs.
Notre Dame de Lourdes, Manchester.....						June 19					Mar. 31	
Chase Home, Portsmouth.....				June		Aug. 23				July 7	July 22	
Mercy Home, Manchester.....											Mar. 22	
Orphans' Home, Concord.....											Apr. 9	
St. Mary's Orphanage, Dover.....											May 5	
Soldiers' Home, Tilton.....						Aug. 17				July 11	May 21	
Manchester Infant Asylum.....						Dec. 16				May 18	Apr. 8	
Hospital of Sacred Heart.....												
Manchester City Farm.....						Dec. 10				Apr. 30	Apr. 30	
Nashua City Farm.....										Apr. 30	Apr. 30	
Portsmouth City Farm.....												
Little Wanderers' Home, Boston.....											Jan. 1	
State Industrial School, Whit-tier Col.....									February		Jan. 1	
County Hospital (Alms-house), Santo Barbara.....					Mar. 11				July			
Aiken (S. C.) County Alms-house.....					Apr. 4							
Aiken (S. C.) County Jail.....										Mar. 18		
Swannanoa Convict Camp.....										Mar. 20		
Honiny Creek Convict Camp.....										Apr. 18		
Lindley Rescue Home for Girls.....										Apr. 18		
Buncombe County Home for White Children.....										Apr. 18		
Buncombe County Home for Colored Children.....										Apr. 19		
Buncombe County Jail.....										Apr. 19		
Asheville City Jail.....										Apr. 20		

TABLE III.
Expenses of Board since the Beginning.

	1895-1896.	1896-1897.	1897-1898.	1898-1899.	1899-1900.	1900-1901.	1901-1902.	1902 to July 1.	Totals.
George G. Davis..	\$31.68	\$33.18	\$30.74	.....	.....	.....	.....	.....	\$95.60
Oliver J. M. Gilman.....	25.94	44.43	46.27	\$31.84	\$42.06	\$24.36	\$27.48	\$19.20	261.58
Melusia H. Varick.....	.....	36.92	49.88	28.47	.....	.....	.....	.....	115.27
Julia R. Carpenter.....	.....	5.68	20.99	1.13	4.44	.....	.....	.....	32.24
John M. Whipple..	.....	.....	.....	8.95	.....	.....	.....	.....	8.95
John Kivel.....	.....	.....	.....	.....	57.78	.....	.....	.....	57.78
Ella L. Follansby.....	.....	.....	.....	.....	48.90	.....	63.34	36.94	149.18
Edward J. Burnham.....	.....	.....	.....	.....	.....	16.24	.....	.....	16.24
James F. Brennan.....	.....	.....	.....	.....	.....	24.90	55.24	17.00	97.14
Lilian C. Streeter.....	.....	.....	.....	.....	.....	16.43	11.62	37.45	65.50
Oliver E. Branch.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sherman E. Burroughs.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
William J. Ahern.....	.....	.....	.....	.....	.....	.....	86.12	138.08	224.20
	\$57.62	\$120.21	\$147.88	\$70.39	\$153.18	\$81.93	\$243.80	\$248.67	\$1,123.68

GENERAL REPORT.

The fourth biennial report of the New Hampshire State Board of Charities and Correction embraces the period from December 1, 1900, to September 30, 1902, two months less than two years, and hereafter the fiscal and statistical year of the board will end on September 30 of each year. This change is made on account of the laws passed by the legislature of 1901, which provide that all statistics, etc., shall be returned to the board on or before the first day of October in each year, both by counties and towns. This gives the board three months in which to compile and tabulate these statistics, and prepare and print their report upon them before the legislature assembles the first Wednesday of January—a very short time, but still long enough if the returns come in promptly on October 1.

The third biennial report of the Board of Charities was printed and delivered to the legislature of 1901, at the very beginning of the session, and so carefully read and considered by the members that all the recommendations of the board except one were accepted and favorably acted upon. The board did not introduce any bill providing for state care of the insane (the only recommendation not acted upon), being advised that it was better to leave it to the legislative committee upon this question appointed in 1899. This committee decided not to introduce any bill, and so the matter went over without any action whatever, either favorable or the reverse. We can, therefore, truthfully report that every bill introduced by the board was favorably acted upon, and we gratefully record here our appreciation of the uniform courtesy and consideration shown the board by Governor Jordan and his council, and the legislature of 1901.

Taking up in order the recommendations of the board in our last report we find :

First, that a law was passed providing for a secretary and clerk from outside the membership of the board, and appropriating two thousand dollars annually for that purpose.

Second, that laws were passed providing for the return to the board of accurate statistics of all pauper relief given by the towns throughout the state.

Third, that a law was passed providing that the ten county reports should be prepared in a uniform manner alike in each county, giving certain statistics also as to insane, feeble-minded, and prisoners, to be returned to the board.

Fourth, that a bill was passed providing for an indeterminate sentence for prisoners.

Fifth, that our recommendation of state care for the insane was not acted upon; and sixth and lastly, that a bill was passed providing for a state school for the feeble-minded, and appropriating thirty thousand dollars wherewith to establish it.

Thus it will be seen that the scope of the board was largely increased by the last legislature, and its standing materially raised.

The board has held twelve meetings during the period covered by this report. A table showing the dates of these meetings, and the attendance, is prefixed on page 25.

Of the original members of the board appointed by Governor Busiel, July 9, 1895, only one, Mr. O. J. M. Gilman, of Alton, is still in office. Since the last report, but one change in membership has occurred. The term of Mr. Oliver E. Branch, of Manchester, expired in July, 1901. He declined a reappointment, and Mr. Sherman E. Burroughs, of Manchester, was appointed by Governor Jordan in his place.

During the period covered by this report, the secretary has visited all the county almshouses, jails and houses of correction of the state, all the orphanages, the Soldiers' Home, and State Industrial School. He has also visited the American School for the Deaf, at Hartford, the Mystic Oral School,

the Maine School for the Deaf, the Perkins Institution and Massachusetts School for the Blind, and the Massachusetts School for the Feeble-minded, at Waverley, Mass., at all which institutions beneficiaries are receiving education at the expense of the state of New Hampshire. Members of the board have also visited many of the same institutions.

A table is prefixed on page 26, showing all the institutions visited by the secretary and members of the board during the biennial period, with dates of visits and names of visitors, and written reports of the visits are on file at this office. Brief accounts of each institution visited will also be found elsewhere in this report. Whenever these visits have been made, those in charge have uniformly given all the information required concerning the inmates and their methods of caring for them. As it is the desire of the board to keep in close touch with the work of these institutions, this ready compliance with their wish to obtain accurate information concerning the conditions and working methods has been of the greatest assistance. Whenever the board in its advisory capacity has seen fit to make any recommendations for changes and improvements, in nearly every instance such recommendations have been kindly received, and acted upon with reasonable promptness.

Taking up the records in order, we find very little in the bare skeleton of facts recorded that shows the real work of the board. In December, 1900, a committee was appointed to confer with the executive committee of the State Conference with reference to the coming meeting of the Conference. The annual meetings of this State Conference, established by the board in 1899, are of the greatest possible educational value, and there is a steady growth in the membership and attendance at the meetings most gratifying to its founders. The meeting held in February, 1901, was devoted chiefly to addresses and discussions advocating a State School for the Feeble-minded, and State Care for the Indigent Insane.

At the board meeting held Janury 16, 1901, the text of the different bills to be presented to the legislature was approved

and spread upon the records, and a committee appointed to look after their progress. At this same meeting Mrs. Streeter was granted leave of absence on account of ill health.

At the meeting held May 25, 1901, a letter was presented from the court stating that it would be necessary for them to claim the room in the State Library building occupied by the board, and the secretary was instructed to transmit the letter to the governor, with the request that the state provide suitable quarters for the board elsewhere. In accordance with this request two pleasant rooms in the Opera House Block, opposite the State House Park, were rented by the state for the use of the board, and fitted up with every regard for their comfort and convenience, thereby adding another to the many debts of gratitude already incurred to Governor Jordan and his council. At this same meeting, May 25, 1901, Miss Caroline E. Evans (who had been the efficient and faithful assistant of the board since Governor Rollins and his council, in April, 1901, made the original grant to the board of two hundred dollars for clerical assistance), was chosen as permanent clerk under the new law, her appointment to date from April 15, 1901. At the adjourned meeting held May 30, 1901, Mrs. Streeter resigned as secretary, and Mr. W. J. Ahern was chosen as the new salaried secretary under the new law, his work to begin June 15, 1901. Mr. James F. Brennan, who had served the board as chairman since November, 1900, resigned at this same meeting (May 30, 1901), and Mrs. Lilian C. Streeter was chosen chairman in his place. At each meeting of the board held since the appointment of Mr. Ahern as secretary, he has presented a report in writing covering all the work done by him since the previous meeting, including institutions and children visited, and information as to the general status and condition of affairs, of great value to the members of the board, each of whom receives a copy for his own files.

Though before the new secretary was appointed the office of the Board of Charities was thoroughly organized, the card record prepared, the volunteer visitors at work, and all was

ready for the expansion and perfection of the system, there still remained a great deal to be done in carrying out the work authorized by the new laws. The first duty of the secretary, therefore, after visiting the state and county institutions, and familiarizing himself somewhat with the details of the work and its needs, was to prepare and issue to county commissioners and town overseers of the poor, the blanks for statistics called for by the new laws. These were sent out in September, and though it was of course too near the time when they were to be returned to expect complete replies from all the towns, and many of the facts desired had not been hitherto recorded, the returns were most unexpectedly full and satisfactory, all but eleven of the two hundred and thirty-four towns in the state finally filling out and returning the blanks. For the year ending September 30, 1902, every town has filled out and returned the blanks. Tables compiled from these returns both for 1901 and 1902 are appended (see pp. 68, 69) and at last we have in New Hampshire a sound basis for complete and correct facts regarding the charities and correction of the state and the cost of its burden of pauperism and crime. It is not too much to say that the laws providing for these statistics are among the most valuable and important measures ever passed, and though they have greatly increased the labors of the Board of Charities and placed some added duties upon the shoulders of the overseers of the poor and county commissioners, they are well worth the trouble involved, both from a scientific and economic point of view.

The Board of Charities is of the opinion that the total amount of the pauper expense account of the state will be a surprise to most of the taxpayers. When to this sum is added the cost to the state of the jails, the industrial school, and the state prison, the sum total is indeed formidable.

At the meeting of July 9, 1901, the chairman and secretary were appointed a committee to prepare and issue the blanks for statistics to county commissioners and town overseers of the poor, and at the September meeting they were also

appointed a committee to revise the by-laws in accordance with the change in the laws. At this meeting Mrs. Streeter was reëlected chairman for the ensuing year. At the meeting held November 20, 1901, the following resolutions were passed regarding the fire which destroyed the Merrimack county buildings on November 16, 1901, after which the insane paupers were all placed in the State Hospital:

Resolved, That the State Board of Charities and Correction strongly approves the action of the county commissioners in committing the insane paupers of Merrimack county to the care of the New Hampshire State Hospital.

Resolved, That the State Board of Charities and Correction also heartily commends the action of the Merrimack county delegation in permanently removing the criminals of the county from association with the worthy poor.

Resolved, That the State Board of Charities and Correction respectfully suggests to the county commissioners of Merrimack county that before plans are accepted for rebuilding the county almshouse some recommendations and suggestions be received from the board.

Resolved, That copies of the above resolutions be sent to the chairman and clerk of the county delegation and board of county commissioners.

In reply to these resolutions the following letter was received:

“CONCORD, N. H., November 25, 1901.

“MRS. LILIAN C. STREETER, *Chairman Board of Charities and Correction.*

“*Dear Madam:*

“The commissioners of Merrimack county tender their thanks to your honorable board for its commendatory vote of approval and appreciation of their action in committing the pauper insane of the county to the New Hampshire State Hospital, and for its added interest in the reconstruction of the almshouse in Boscawen.

" They will be pleased to receive such recommendations and suggestions as you see fit to make, and would respectfully advise a conference at an early date to perfect plans for the building.

" Very respectfully,

" WALTER BURLEIGH,

" D. W. SULLIVAN,

" FRENCH NELSON,

Merrimack County Commissioners."

In response to this letter these recommendations were sent to the board of county commissioners :

" *To the Board of County Commissioners:*

" The State Board of Charities and Correction respectfully present to you the following recommendations in regard to the erection of new county buildings to take the place of those lately destroyed by fire at North Boscawen.

" First, That no building shall be constructed over two stories in height.

" Second, That no room used for laundry or cooking purposes shall be in the basement of any building.

" Third, That all hospital wards shall be on the first floor.

" Fourth, That consideration shall be given to the general desire that the insane shall be cared for by the state."

The Board of Charities is very glad to say that these recommendations were in general considered and acted upon favorably, as will be seen in the detailed account of the new Merrimack county almshouse elsewhere in this report.

At the meeting held January 23, 1902, the board approved the action of the secretary in calling the attention of justices of the police courts to the law passed at the last session of the legislature providing for the commitment of minors under the age of fourteen years to the industrial school, instead of jail, pending trial for offences for which they may be charged.

This is only a step, but it is at least one step in the right direction towards a better and more enlightened treatment of juvenile offenders in the state. At present we have no juvenile courts, and not a single probation officer in the state.

The March meeting, 1902, was omitted by reason of the unavoidable absence from the state of several members of the board.

On March 20, 1902, the secretary of the Board of Charities and Correction was appointed an agent of the Society for Prevention of Cruelty to Children, by the president of the society, with power to act for that society in investigating cases and securing needed action. Under the provisions of the Public Statutes (chapter 178, sections 16 and 17) the Society for the Prevention of Cruelty to Children is the only agent legally permitted to interfere in cases of cruelty to or neglect of children. Previous to this appointment the lack of authority of the Board of Charities to act when complaints were made at their office was a serious drawback to their work. Every complaint made emphasized the necessity that the board should have the legal right to demand certain concessions from parents, relatives or other persons having these children in charge, and that provision should be made for the expenses incident to protecting the children.

The board has been appealed to at least twelve times during the last two years to interfere in behalf of children who were being cruelly treated. When these children are not paupers in the strict sense of that term, the county or town authorities do not feel that it is their duty to assist in providing another home when it is found necessary to remove them. The state should give the State Board of Charities the authority and the means to provide in such cases when necessary. Though for manifest reasons the particulars in most of these cases cannot be given in this report, one case in point may be cited. The father of a boy seven years old had ill-treated him in such a way that the neighbors became indignant, and provided a home for him in another family free of charge. He was a good boy and would have remained

in this home but for illness in the family, which made it impossible for them to care for him longer. The county commissioners refused to assist, on the ground that the father was able to provide for the boy. The residents of the town objected to his return to such a home, and appealed to the State Board of Charities. Several unsuccessful attempts were made to find a suitable home for him, but we were finally fortunate enough to secure a place free of charge at one of the smaller orphans' homes of the state, where he now is—a happy, well-cared for little boy.

On April 30, 1902, three members of the board and the secretary attended the fourth annual meeting of the State Conference of Charities, at Manchester, which was the largest meeting the conference has ever held, and by far and away the best, both in point of quantity and quality of attendance, addresses and discussions.

The Conference now has one hundred and twenty-two members, and the assembly was truly a representative one. There were keen lawyers, wide-awake doctors, earnest, thoughtful ministers, business men, and bright women. The presence of Dr. William Jewett Tucker, as presiding officer, gave dignity and impressiveness to the whole meeting. The Rt. Rev. Denis M. Bradley, Bishop of the Catholic diocese of Manchester, was also present, and many other members of the clergy of different denominations. The county commissioners were unusually well represented, and several spoke, thereby adding much to the interest of the discussions.

Truly a new era is dawning in our state when men and women, Catholic and Protestant, are working together regardless of creed or sex, animated only by their earnest desire to improve the condition of those unfortunates who cannot help themselves.

Aside from the reports of the committees, the main topic of the meeting was the need of state care for the indigent insane, with the sentiment of the conference wholly in favor of it. The chief address upon the subject was given by Mr. Sherman E. Burroughs, a member of the State Board of Charities and Correction.

The meeting of May 19, 1902, was devoted to the consideration of some difficult cases of children in homes, and to the reports from members of visits made, an unusual number being presented, especially of visits outside the state. The chairman presented reports upon the Aiken county poorhouse and jail, Aiken, S. C., the Buncombe county jail, North Carolina, and the two Buncombe county children's homes, one for colored and one for white children, the Swannanoa and Hominy Creek convict camps of Buncombe county, the Asheville city jail and Lindley Rescue Home for Girls. These reports are all on file at the office, where they can be seen by any one interested. It is felt that the North Carolina system of building good macadam roads by convict labor is one that New Hampshire might well study and profit by. There is no doubt that our present system of simply confining criminals in idleness is wrong in every way, and tends to increase rather than diminish crime.

From May 28 to June 3, 1902, the chairman and secretary were in attendance upon the National Conference of Charities and Correction, in Detroit, as delegates specially appointed by the governor to represent New Hampshire.

The help and inspiration received were of inestimable value to both delegates, who returned to New Hampshire with greatly strengthened zeal and enthusiasm for their home work.

The meeting of July 9, 1902, was entirely devoted to the consideration of the cases of the various state beneficiaries with reference to renewing or discontinuing recommendations to the governor and council for their continued education at the expense of the state.

The meeting of September 17, 1902, was the annual meeting under the former by-laws. The committee on revision of by-laws — Mrs. Streeter and Mr. Ahern — presented their report, which was accepted and adopted, and the by-laws as revised will be found appended. The new by-laws provide for the annual election of chairman and standing committees in January of each year, and it was voted that the present incumbents should hold office until that time.

This closes the formal records of the biennial period, which as previously stated, must now end September 30 of each year, on account of the laws which provide that all statistics shall be returned to the board at that date.

TABLE IV.

*Statistical table of children fifteen years and under in New Hampshire dependent upon public funds for support,
October 1, 1902.*

COUNTY.	In almshouses.		At orphans' homes.		Families.		Insane.		Mercy Home.		Industrial School.		Total dependent.	Total delinquent.	Total delinquent and dependent.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.			
Rockingham.....	5	5	24	19	7	4	.....	.....	1	.....	3	.....	64	4	68
Strafford.....	5	3	32	12	12	2	.....	.....	.....	.....	.....	.....	66	.....	66
Belknap.....	.....	2	.....	.....	4	4	.....	.....	.....	.....	1	.....	10	1	11
Carroll.....	3	2	1	.....	11	5	.....	.....	.....	.....	.....	.....	22	.....	22
Merrimack.....	1	1	14	4	5	7	1	.....	.....	.....	1	.....	33	1	34
Hillsborough.....	10	3	63	64	7	3	.....	.....	.....	.....	6	1	150	7	157
Cheshire.....	1	1	6	2	.....	2	.....	.....	.....	.....	1	1	12	2	14
Sullivan.....	.....	.....	4	5	10	10	.....	.....	.....	.....	3	.....	29	3	32
Grafton.....	4	5	11	9	2	2	.....	.....	.....	.....	1	.....	33	1	34
Cook.....	7	2	3	1	5	4	.....	.....	.....	.....	.....	.....	22	.....	22
	36	24	158	116	63	43	1	1	1	.....	16	2	441	19	460

DEPENDENT CHILDREN.

There has been no change in the laws directly affecting the dependent children of the state since the last biennial report. All these children are directly under the care of the ten boards of county commissioners of the state, whose duty it is to place them either in homes or institutions, and when so placed they are under the supervision of the State Board of Charities and Correction.

In January, 1900, the State Board of Charities and Correction voluntarily assumed the preparation of a card record of these dependent children. Previously to that time no list had been kept by any one, and no one really knew just how many dependent children there were in the state nor where they were placed. This card record was not completed until November, 1900, when final returns from all the counties showed a total of 443 children dependent upon public funds for support upon that date.

The State Board of Charities and Correction also voluntarily assumed at the same time the responsibility of providing each one of these children with a "Volunteer Visitor" who should visit the child regularly and report quarterly to the board, and at the time our last report was rendered there were sixty-three of these visitors.

There being no compensation connected with this work, it is literally a labor of love. These visitors, most of whom are women, visit the children regularly, and keep a kindly watch over their home-life and training. They send quarterly reports to this board, and make any suggestions they consider necessary as to their charges. On October 1, 1902, we had seventy-five of these visitors, to whom we are deeply indebted for the work they have done, the interest they have shown, and the information they have furnished.

An occasional general meeting of all the Volunteer Visitors of the state to discuss the questions involved and compare notes, would be of great value from every point of view. The board would recommend that such a meeting be held in connection with the next State Conference of Charities, and if

possible be addressed by an experienced Visitor from some other state, who would also answer questions and give advice.

During the twenty-two months which have elapsed since our last report there have been many changes in the card record. A great majority of the children are constantly being transferred from one place to another, and while as our system becomes perfected we are constantly brought more and more into touch with them, as the State Board of Charities has no absolute authority over the children, its function being merely supervisory and advisory, it is not responsible for the fact that the record of October 1, 1902, shows no diminution in the number of dependent children, and no increase in the percentage of those placed out in homes instead of institutions.

Table IV, page 42, shows that there were on October 1, 1902, 460 children in the state directly dependent upon public funds for support. Of this number 274 are subject to institutional care, 106 are placed out in private families, sixty are still in the almshouses, and the remainder are in the Industrial School. In addition to the 460 children within the state, there are, under the provisions of the law of 1879, thirty-eight children supported outside the state as follows: Twenty-one at institutions for the deaf and dumb, fourteen at the Massachusetts School for the Blind, and three at the Massachusetts School for the Feeble-minded at Waverley, making 498 children in all cared for by public funds.

The fifteen private orphanages in the state of New Hampshire are at present supporting 979 children, a statistical table of which will be found on page 49.

Deducting from the total of 979 children the 274 county charges included, and we have a balance of 705 children supported by private charity, or a total for the whole state of public and private charges both of 1,203 dependent children against 1,061 two years ago. Yet two years ago out of a total of 1,061, 113 were placed out in families, or about ten per cent., leaving ninety per cent. in institutions, while to-day

we have 1,097 in institutions and only 106 in homes, or about eight per cent., showing that the increase in the total number, 142, is entirely in institutions, of whom fifty-two or a little over one third are county charges.

In this connection it may be interesting and profitable to take up the different counties in turn, and note their disposition of their children. We will omit the children still in almshouses, as they are nearly all either idiotic or infants, with possibly a very few temporarily in the almshouses awaiting placing out.

Rockingham county, out of a total of fifty-four children, has placed forty-three in institutions and only eleven in private homes (twenty per cent.).

Strafford county with a total of fifty-eight children has forty-four in institutions and fourteen in private homes (twenty-four per cent.).

Belknap has every one of her eight children placed out in good family homes, one hundred per cent., the best record of any of our counties.

Carroll, out of a total of seventeen children, has only one in an institution, and sixteen in good private homes, almost as good a record (ninety-four per cent.).

Merrimack with a total of thirty-one children has nineteen in institutions and twelve in homes (thirty-nine per cent.).

Hillsborough has a total of one hundred and thirty-seven children, of whom one hundred and twenty-seven are in institutions and only ten in private homes (seven and one half per cent.).

Cheshire has ten children in all, eight in institutions and two in private homes (twenty per cent.).

Sullivan has twenty-nine children in all, only nine of whom are in institutions, and twenty are in good private homes, a larger number in homes than any other county, and sixty-nine per cent. of their total. The Sullivan county children are exceptionally well placed, and are doing remarkably well. No other reports received at the office of the board are so entirely

satisfactory as the reports from these children. The nine in institutions have been there for a long time, and must soon pass out of the county care.

Grafton county has twenty-four children in all, twenty of whom are in institutions, and only four in families (sixteen per cent.).

Coös has thirteen children, four in institutions, and nine in private homes (sixty-nine per cent.).

To sum up, placing the counties in order, beginning with those having the smallest percentage in homes, we find,

	In Institutions.	In Homes.	Percentage in Homes.
Hillsborough,	127	10	7½%
Grafton,	20	4	16%
Rockingham,	43	11	20%
Cheshire,	8	2	20%
Strafford,	44	14	24%
Merrimack,	18	12	40%
Sullivan,	9	20	69%
Coös,	4	9	69%
Carroll,	1	16	94%
Belknap,		8	100%
	<hr/> 274	<hr/> 106	

From this statement it can readily be seen that the greatest difficulties in the way of placing children in good private homes lie in the larger counties, where there are greater numbers to deal with and the county commissioners are already so overburdened with the management of other county affairs, that they literally have not the time to spend in hunting up homes for the great number of children in their charge. It takes but a moment to dispatch a child to an orphans' home that is ready and waiting, where it takes hours to hunt up a private home, and suit the right home to the right child. If each one of the larger counties could employ an agent who should have entire charge of placing the children in homes, the whole problem would be solved.

A total of 1,203 children wholly or partially supported by public or private charity is unusually large for a state so small as New Hampshire, and the question naturally arises, what is the reason for it? In looking over the records and through the returns of the overseers of the poor, it will be found that many are orphans, death and misfortune are thus the cause of their dependency; but many are children deserted either by one parent, usually the father, or by both parents, and their dependency is due to desertion. By far too large a number are included in this latter class, and as individual cases come to the attention of the officers having this work in charge, it is no wonder that they urge that a law be enacted which shall be so stringent that every able-bodied parent shall be compelled to care for his offspring, and failing in this that he shall be liable to the severest penalty. Whatever the reason why we have so many dependent children in New Hampshire, the fact still remains that this small army of children are with us, and need our care and protection; and the most strenuous efforts should be made to provide for them proper environment, teaching, and training, so that in the future they may take their places in the ranks of workers rather than in the ranks of paupers.

The board would repeat again its warning of two years ago regarding the steady increase of the number of children in institutions and would emphasize more strongly than ever the imperative necessity of reducing the number of these dependents. This can only be done by patient care and study of each individual case. The experience of other states has proved that with proper expenditure of time and thought, nearly every dependent child can be placed either in a private boarding home or a free home, or be returned to its natural guardians. The only trouble in this state is that public opinion is not yet thoroughly aroused to the dangers of the present situation.

It is a well known fact that large numbers of children from other states, especially Massachusetts, are every year placed out in good homes in New Hampshire. There is no reason why these homes should not be occupied by our own children.

In this connection it should be stated that the state of Massachusetts pays \$2.00 per week for its placed out children, while New Hampshire pays only \$1.25, and this is one reason which makes it more difficult to place the New Hampshire children.

Another fact well to consider in placing out children is that it is far easier to find good homes for little children, than for those ten or twelve years of age, already thoroughly imbued with the institution idea. By that time they generally think that the world owes them a living, just as their fathers and mothers thought before them. Moreover, people who want a child ten or twelve years old generally want it for what they can get out of it, while a baby or very young child will only be taken to fill a real child-love and need.

The State Board of Charities is at present powerless to act in any definite and practical way in placing out children. It can only endeavor to shape and influence public opinion in the right direction.

TABLE VI.

Statistical table of children in state dependent upon private and public support in Orphans' Asylums and Homes,
October 1, 1902.

	Number of inmates.		Total number of inmates.	Number of county charges 15 years and under.		Total number of county charges 15 years and under.	Sum of annual expenses.	Amount of permanent fund.	Date of foundation.
	Boys.	Girls.		Boys.	Girls.				
New Hampshire Orphans' Home, Franklin.....	89	42	131	43	23	66	\$16,308.08	\$125,856.00	October, 1871
Manchester Children's Home, Manchester.....	24	21	45	6	3	9	4,455.00	20,788.30	1884
St. Patrick's Orphanage for Girls, Manchester.....	.....	112	112	.....	45	45	.....	.....	1873
St. Joseph's Boys' Home, Manchester....	125	.....	125	55	.....	55	.....	.....	1888
St. Vincent de Paul, Manchester.....	51	52	103	13	3	16	.....	.....	1892
Notre Dame de Lourdes, Manchester.....	45	94	139	4	16	20	.....	.....	1885 July, 1902
St. Peter's Orphanage, Manchester.....	75	.....	75	12	.....	12	.....	.....	Jan. 6, 1902
Our Lady of Perpetual Help Infant Asylum, Manchester.	10	13	23	3	2	5	.....	.....	.....
St. Mary's Orphanage, Dover.....	.....	24	24	.....	14	14	.....	.....	1888
Children's Home, Dover.....	19	11	30	12	4	16	2,811.62	11,100.00	1892
Children's Home and Day Nursery, Nashua.....	5	12	17	2	2	4	1,450.86	.....	1894
St. Joseph's Orphanage, Nashua.....	46	39	85	5	3	8	.....	.....	1900
Chase Home, Portsmouth.....	7	7	14	1	1	2	1,975.12	19,925.27	1877 April 4, 1866
Orphans' Home, Concord.....	22	16	38	2	.....	2	4,842.25	25,000.00	.....
Rolfe and Rumford Home for Girls, Concord.....	.....	18	18	.....	.....	.....	.....	.....	1880
	518	461	979	158	116	274	.....	.....	.....

ORPHANS' HOMES.

There are fifteen orphans' homes in New Hampshire, seven Protestant and eight Catholic, detailed reports of each one of which will be found appended. Three of these orphanages have been founded since our last report, all Catholic, St. Joseph's for boys and girls in Nashua, established in 1900, St. Peter's Orphanage for boys nine years old and upwards, established in West Manchester in July, 1902, to accommodate the overflow from Notre Dame de Lourdes, and Our Lady of Perpetual Help Infant Asylum, established in Manchester by the Sisters of Mercy in January, 1902.

The number accommodated in these homes varies from one hundred and thirty-nine in Notre Dame de Lourdes to twenty in the three smallest orphanages in the state, the Chase Home, the Nashua Day Nursery, and the Rolfe and Rumford Home. Every one of these homes is a private institution, managed by private boards of trustees, and supported mainly by private funds. But in all but one, county or city children are boarded at public expense, varying in number from sixty-six at the Franklin Orphans' Home, half their entire number of inmates, to two each at the Chase Home in Portsmouth, and Concord Orphans' Home. Each one of these private institutions where public charges are boarded is legally under the supervision of the State Board of Charities in the performance of their duty of visiting and looking after all children supported by public funds. Counties and cities pay from one dollar to two dollars per week for the board of their charges, and they are generally clothed by the orphanage. Only two of these institutions, the Manchester Infant Asylum and the Franklin Home take babies, and the Franklin Home now does not receive any children under six months. The larger orphanages maintain their own schools within their own walls, while the children in the smaller institutions attend the public schools. Speaking generally the smaller homes are freer from the inevitable evils of institution life than the larger ones,

for the conditions there do not differ materially from the conditions in good private homes—the children receive more of the personal attention of the matron, who stands to them *in loco parentis*, and has opportunity to study each individuality. They take more part in the daily routine of the home life, with its economies and self-denials, and the fact that they attend the public schools with the other children of the place, and public religious services, tends to make them more a part of the common life of the neighborhood, less conscious of the difference in their condition from that of ordinary children in happy homes. While the closest economy is of necessity practiced in all the orphans' homes of the state, the economies are more apparent to the children in the smaller homes than in the large institutions where the regular discipline and routine demand that everything shall be done in a large rather than a small way. In supervising, controlling, and teaching a large body of children the managers of the institutions must keep the children so entirely under the control of systematic discipline that little scope is left for development of originality. It is each child's birth-right to receive his portion of the blessed mother-love of the world, to feel his own particular mother-love enclosing and protecting him like a garment, and that is why the State Board of Charities feels so strongly that first of all, each little motherless or homeless dependent in the state should be placed in a good private home where he will have good motherly care. Failing this, he must be placed in an institution until a home can be found. In this connection the Board of Charities is very happy to be able to heartily commend the New Hampshire orphanages. The most faithful, conscientious and devoted care is given to their small charges by superintendents, matrons and helpers, and the happiness and well-being of the children is studied in every possible way. The schools in the orphanages are graded like the public schools, and the character of the instruction given compares most favorably with that given in the public schools. Especially to be commended are the kindergartens in the Franklin Orphans' Home and Notre Dame de Lourdes.

STATE BENEFICIARIES.

The policy adopted by the legislature of New Hampshire in 1819, based on the idea that it was the duty of the state to provide an education for children deficient in speech, hearing, or sight, has produced beneficial results, and many boys and girls have received instruction, not only in books, but in manual training, and thus have been given an opportunity of becoming independent and self-supporting. Without this opportunity many of them would have been dependent upon charity. The state insists that its normal children shall be provided with an education, and inflicts penalties for neglect in this particular; surely she should take the same protective interest in her blind and deaf and dumb children, and furnish them, burdened as they are with their infirmities, with an education which shall be of assistance in their struggle for an existence.

The annual appropriation of \$4,000 for the education of the blind and \$5,000 for the deaf and dumb, was sufficient in former years, but at the present time these amounts are wholly inadequate to provide for all the children who now apply at this office for admission to the various schools for the deaf and dumb and the blind. This last year the American School for the Deaf has given one of New Hampshire's beneficiaries, a young girl fourteen years of age, free instruction. There was nothing left of the appropriation to apply toward her expenses, and the principal of the school said it seemed so wrong to send her away that he concluded to allow her to remain at the expense of the school. This was a gracious act, and the State Board of Charities fully appreciated the kindness; but New Hampshire should not be in a position where it becomes necessary for her, a state, to accept a favor from a school which must be less able than herself to bear the burden. This state was one of the first to make provision for these unfortunate children, but she has not kept her first place in the march of progress, for there is scarcely another state in the Union which does not now provide for all dependent blind and deaf and dumb children.

We would therefore respectfully recommend that the law enacted for this purpose be amended, and the amount of the appropriation be not specified but be determined by the governor and council as necessity demands.

The following is a statement of the number of the state beneficiaries at the different schools:

Perkins Institution and Massachusetts School for the	
Blind	14
American School for the Deaf, Hartford, Conn.	11
Maine School for the Deaf, Portland, Me.	4
Clarke School for the Deaf, Northampton, Mass.	6
Waverley School for the Feeble-minded	3
	<hr/>
	38

STATE SCHOOL FOR THE FEEBLE-MINDED.

One of the recommendations of the State Board of Charities and Correction to the legislature of 1901 was that a School for Feeble-minded Children should be established in New Hampshire, and the legislature, acting upon this recommendation, passed a law March 22, 1901, appropriating \$30,000 for this purpose.

The establishment of this school was one of the most pressing needs of the state. The population of our county almshouses and our statistics of outdoor relief show a large number of feeble-minded persons wholly or partially supported by public funds. Of this number there are forty-seven under the age of twenty-one years who will come within the scope of this school as is shown by the following list:

NUMBER OF FEEBLE-MINDED TWENTY-ONE YEARS AND UNDER AT COUNTY ALMSHOUSES OCTOBER 1, 1902.

Rockingham County almshouse	.	.	.	.	4
Carroll	"	"	.	.	7
Merrimack	"	"	.	.	2
Grafton	"	"	.	.	4
Hillsborough	"	"	.	.	12
Strafford	"	"	.	.	2
Sullivan	"	"	.	.	3
Belknap	"	"	.	.	3
Cheshire	"	"	.	.	4
Coös	"	"	.	.	6

47

Under twenty-one years of age — Males, 26; females, 21.

When we add to this large number of dependent feeble-minded persons those who are supported and cared for by their own families, the importance and wisdom of the law providing for their education need no argument.

This school has been located in Laconia. The situation by reason of its elevation and the beauty of the surrounding country is delightful as well as healthful. Two farms consisting of two hundred and forty-seven acres have been purchased, and nearly all of the land is tillable. The purchase included three farmhouses, one of which is occupied by the farmer in charge. Another has been remodeled, and will be occupied by the superintendent as his residence. A new brick dormitory has been erected, and is modern and first-class in all its appointments.

The trustees have been fortunate in obtaining Dr. C. S. Little, of Webster, to act as superintendent. He is a trained specialist in brain diseases, is a practical man, and has had much experience in institutional work. His wife, who is also a physician, will be the matron.

It is the purpose of this school to furnish for these defective children a training that will eventually render a large majority

of them self-supporting. Training of this nature is a long and tedious process. Each child has to be watched and studied to learn if he has an aptitude for any one thing, and if such aptitude is discovered, the object is to develop his ability in that direction. If a child has no special bent, he can be taught to till the land, and under proper management may produce as much in value as he consumes.

Few persons realize the suffering and vice or the high burden of taxation resulting from the conditions of life among the feeble-minded population of our state, and New Hampshire has taken a wise step in providing proper training for this unfortunate class, but she should go further and make this institution custodial as well as educational. The children dependent upon charity for support, who are taken into this school and trained, should remain there to render useful service, and be forever separated from the world. They could become nearly or quite self-supporting, and their separation from outside communities would protect this class of unfortunates as can be done in no other way.

It is of especial importance that custodial care should be given to all adult feeble-minded women of child-bearing age, and the State Board of Charities is unanimous in recommending such action to the present legislature. It is by all means the most important need of the state just now in its charitable work, and such action would do more to diminish the ever-increasing ratio of pauperism and crime than anything else.

TABLE VIII.

Statistical Table of Almshouse Population in State for the Year ending September 30, 1902.

[illegible]

* Nativity not given.

ALMSHOUSES.

Tables are prefixed showing exact almshouse population on October 1, 1901 and 1902, with many facts regarding the age and nativity of paupers, and causes of pauperism, never before recorded in our state. The expense per capita per week is taken from the county commissioners' reports of January 1, 1902, as the county commissioners are as yet unable to give statistics of expenses dating October 1, each year. It varies from \$1.30 per week in Grafton county to \$2.20 in Cheshire county.

From table VIII, it will be seen that 1,630 paupers in all have been cared for at the ten county farms during the year ending September 30, 1902, of which number 843 remained at that date, a number likely to be largely increased as cold weather approaches. A census taken January 1, instead of October 1, would probably show twenty-five per cent. increase in numbers.

It is interesting to note that of this total of 1,630 paupers, 866, or more than half, are native born; 199, or twelve per cent. are Irish; 145, or about nine per cent. Canadian, chiefly of French descent, and the numbers from remaining countries, England, Scotland, France, Germany, Sweden, etc., so small as practically not to be worth considering.

The causes, too, of pauperism are significant — 687 out of the 1,630, nearly one half, or forty-two per cent., of the total number of inmates of our county farms, are there by reason of insanity, feeble-mindedness, or epilepsy, while only 238 are there on account of old age, only nineteen per cent. of the total, and only seventy-five by reason of illness — though our county almshouses are really intended, primarily, for the care of the sick and aged poor.

All our county almshouses are well situated, nearly all on high land, with good drainage, and plenty of air and sunlight. All are heated by steam, eight are lighted by electricity, and eight have night watchmen throughout the year. Two counties, Belknap and Sullivan, employ night watchmen only from October 1 to April 1. The food, though

plain, is abundant at each one, and generally well cooked, and the cleanliness, under existing conditions, usually remarkable. The superintendents and matrons are, without exception, faithful and efficient, and altogether New Hampshire has great reason to congratulate herself in a general way upon her almshouses.

It is, however, the duty of the board to point out some grave conditions which should be remedied. Individual defects will be found mentioned in the individual reports. Among the defects common to all, the faults of our county system of caring for the insane are pointed out elsewhere (vid. page 73). Intimately connected with this condition is the fact that there are no trained nurses employed in any of our almshouses, though, besides the insane, patients afflicted with almost every known chronic disease are found within their walls, acute diseases are not uncommon, and obstetric cases are constantly occurring in them all. The board is of the opinion that each one of the larger county farms should employ one or more trained nurses as a part of their regular permanent staff, and this is also the general opinion of the various county physicians. The greatest menace to life and property at our county institutions is fire, and we would urge the officials to use every precaution to guard against it. As our almshouses are remote from large cities and towns, and as each one must depend upon the means at hand in cases of emergency, it becomes of the greatest importance that hydrants, stand-pipes, hose, and all the equipment used should be ample, of first class quality, and frequently inspected. All the employees should be trained in the use of the apparatus, and at no time should the buildings be left without some one on the premises who, in case of fire, could act promptly and intelligently. The county commissioners are feeling more and more the necessity of being as well prepared as possible, and within the last year, at nearly every almshouse, new hose, stand-pipes, or fire extinguishers, have been provided. It would be well if fire escapes could be built also. They should be so arranged as

to be accessible from the different floors of the buildings, and offer safe, certain and speedy escape to the aged and infirm inmates. During the last year Merrimack county has suffered great loss financially by the burning of her county building at North Boscawen. Fortunately no lives were lost, but this experience of having a brick building — not fireproof, of course, but considered one of our safer almshouses — burn to the ground in the daytime, invests with great apprehension and horror the terrible possibilities latent in the condition of some of the tinder-boxes in the state now designated as “county almshouses.”

TABLE IX.

Total number of prisoners committed to Houses of Correction at County Farms from October 1, 1900, to October 1, 1901.

COUNTIES.	Men.	Women.	Nativity.		Causes of commitment.					Total.
			United States.	Foreign.	Drunkenness	Offenses against person.	Offenses against morals.	Offenses against property.	Other offenses.	
Rockingham	176	16	120	72	186	2	.....	3	1	192
Strafford.....	147	12	112	47	151	5	.....	1	2	159
Belknap.....	60	5	52	13	55	.....	.....	2	8	65
Carroll.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merrimack *.....	163	7	.....	.....	125	2	3	2	38	170
Hillsborough.....	148	44	151	41	78	10	22	31	51	192
Cheshire*.....	26	3	.....	.....	20	.....	3	2	4	29
Sullivan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grafton *.....	37	.....	.....	.....	31	2	.....	4	.....	37
Cods. *.....	28	.....	.....	.....	17	.....	.....	8	3	28
	785	87	435	73	663	21	28	53	107	872

* Nativity not given.

TABLE X.
Total number of prisoners committed to Houses of Correction at County Farms, from October 1, 1901, to October 1, 1902.

COUNTIES.	Men.	Women.	Nativity.		Causes of commitment.						Total.
			United States.	Foreign.	Drunkenness	Offenses against person.	Offenses against morals.	Offenses against property.	Other Offenses.		
Rockingham	205	29	148	86	219	2	3	3	7	234	
Strafford.....	90	9	67	32	85	6	1	3	4	99	
Belknap.....	63	.....	43	20	57	.....	.....	6	.....	63
Carroll .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merrimack *	29	3	.....	.....	26	.....	2	.....	4	32
Hillsborough	70	11	18	63	34	2	6	15	24	81	
Cheshire *	9	1	.....	.....	8	1	.....	.....	1	10
Sullivan.....	2	.....	2	.....	2	.....	.....	.....	.....	2
Grafton*.....	21	1	.....	.....	10	2	2	4	4	22
Cotis*.....	45	4	.....	.....	32	2	.....	12	3	49
	534	58	278	201	473	15	14	43	47	592	

* Nativity not given.

COUNTY HOUSES OF CORRECTION.

In addition to the 1,630 paupers confined in our ten almshouses during the year ending October 1, 1902, there were also 592 prisoners confined there during the year in the departments called Houses of Correction, though in point of fact in some of the county farms there is no distinction made between prisoners and paupers, all eat at the same board and have the same liberty. The Board of Charities called attention to this state of affairs in its last report, and would here repeat that it cannot too strongly condemn the custom. The revolting details of the murder of Mrs. Folsom near the Merrimack county farm, by a prisoner in the house of correction there, who was allowed the freedom of the place, are still fresh in the public mind and should not be allowed to fade until the law is repealed.

It is gratifying to note a great reduction in the number of prisoners committed to county houses of correction during the second year of our biennial period. A total falling off of two hundred and eighty is a healthy sign, and the greater part of this reduction was made in Merrimack county, where only thirty-two prisoners were sent to the house of correction in 1902, against one hundred and seventy in 1901. Almost as great a reduction is apparent in Hillsborough county, where eighty-one were committed in 1902 against one hundred and ninety-two in 1901. Strafford, Cheshire and Grafton counties also show a material reduction for 1902. This is almost entirely due to the state of public opinion aroused by this murder.

The survival of a law which sends able-bodied tramps, drunkards and petty criminals to the same institution which shelters the aged poor, the sick, feeble-minded and other unfortunates, proves that we have made but little progress in our attempts to better the system of poor relief of former days. Not only do we hear criticisms of the law whereby county farms are made to serve as houses of correction, from the inhabitants of our own state, but in one of the

last annual reports of the New Jersey State Charities Aid Association, in the description of the New Jersey almshouses, the following is found: "Among the features which I trust are few and far between in our institutions might be mentioned the following * * * * We have, of course, no almshouses where the aged poor and the county prisoners eat at the same board, and sleep under the same roof as in New Hampshire." The hard labor method of dealing with prisoners is needed. It should be actual labor, not pretense, and the workhouse should be of such character that it would make for discipline rather than supply a comfortable place for spending the winter.

TABLE XI.

Number of prisoners in Jails October 1, 1902.

COUNTIES.	Men.	Women.	Total.
Rockingham.. { Exeter.....	7	.....	7
{ Portsmouth.....	19	1	20
Strafford	23	.....	23
Belknap	2	.....	2
Carroll	2	.....	2
Merrimack	19	.....	19
Hillsborough.....	40	7	47
Cheshire	17	.....	17
Sullivan	2	.....	2
Grafton	6	.....	6
Coös.....	8	.....	8
Total	145	8	153

TABLE XII.

Expense of Jails from January 1, 1901, to January 1, 1902.

Rockingham county jail	\$7,890.59
Strafford county jail	4,915.36
Belknap county jail.*	
Carroll county jail.*	
Merrimack county jail	3,207.08
Hillsborough county jail	10,173.24
Cheshire county jail.	1,946.81
Sullivan county jail	922.89
Grafton county jail*.	
Coös county jail	622.28
	<hr/>
	\$29,678.25

COUNTY JAILS.

This subject is one of the most discouraging that the New Hampshire State Board of Charities has to deal with. We have already alluded to the evils incident to the fact that the county houses of correction form a part of the county almshouses. Concerning the eleven county jails we cannot speak much more favorably. Only one jail in the state provides any occupation for the prisoners, not one has any separate place for juvenile offenders, some even have no separate place for female prisoners. The system of paying the jailer so much per week per prisoner offers a premium upon numbers and tends to make the advent of a new batch of criminals welcomed instead of deplored, and the longer the sentence is, the better for the jailer. In some of our jails no religious services are ever held and no minister of the gospel

*Carroll, Belknap and Grafton county jails are at their several county farms, and the expense is included in the expense of the respective county farms.

ever sets foot within the doors. In several of the jails cleanliness is apparently the last thing considered, in spite of the scriptural injunction that "cleanliness is next to godliness." The whole jail system is simply that of detention and punishment with no thought whatever of any reforming influence.

The State Board of Charities and Correction is of the opinion that radical changes are imperatively needed—that prisoners should no longer be confined in idleness, but set to work, that they should at least be subject to the unconsciously reforming influence of clean surroundings; that separate quarters should be provided for women and minors in every county jail, and that a probation law should be enacted whereby first offenders and young men and women could be released on parole during good behavior.

A detailed account of each one of the eleven jails in the state will be found elsewhere in this report.

TABLE XIII.

Showing summary of outdoor relief given through town overseers for the year ending September 30, 1901.

COUNTIES.	Number of families.	Number of individuals in families.	Number of children in these assisted families 15 years of age and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given others.	Total amount of relief given.
Rockingham	342	828	322	1,465	\$6,629.93	\$403.87	\$39,976.54	\$47,010.34
Strafford	307	754	315	569	5,701.47	5.00	10,887.73	16,594.20
Belknap	126	367	170	*	1,399.57	74.86	4,874.57	6,349.00
Carroll	52	87	31	5	276.76	186.82	2,476.24	2,939.82
Merrimack	455	1,361	657	302	6,033.00	557.28	21,917.37	28,507.65
Hillsborough	429	1,360	661	408	3,366.09	274.81	17,285.45	20,926.35
Cheshire	250	418	250	408	3,130.74	146.45	16,025.65	19,311.84
Sullivan	268	691	287	74	2,498.34	155.02	10,534.19	13,187.55
Grafton	198	405	155	56	1,689.49	79.18	9,035.88	10,804.55
Cods	99	308	152	5	633.13	18.58	4,610.56	5,262.27
Totals	2,526	6,579	3,000	3,292	\$31,367.52	\$1,901.87	\$137,624.18	\$170,893.57

* Not given.

Amounts paid out by county commissioners in addition to above were not reported for this year.

TABLE XIV.

Showing summary of outdoor relief given through town overseers for the year ending September 30, 1902.

COUNTIES.	Number of families.	Number of individuals in families.	Number of children in these assisted families 15 yrs. of age and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given others.	Total amount of relief given.
Rockingham.....	331	798	318	891	\$6,629.57	\$344.88	\$19,021.32	\$25,995.77
Straford.....	336	857	386	489	5,154.71	63.15	11,597.18	16,815.04
Belknap.....	71	121	35	6	791.18	143.25	2,363.73	3,298.16
Carroll.....	51	119	38	44	238.72	37.25	1,958.12	2,234.09
Merrimack.....	458	1,372	707	308	5,801.84	408.40	24,060.63	30,270.87
Hillsborough.....	403	1,153	500	188	2,356.90	131.73	18,291.39	20,780.11
Cheshire.....	244	548	234	473	3,005.71	212.05	14,719.67	17,937.43
Sullivan.....	183	454	207	107	1,393.86	141.96	8,048.22	9,584.04
Grafton.....	191	447	179	273	1,860.63	133.24	9,713.12	11,706.99
Cos.	171	476	225	*	1,469.05	41.00	8,623.56	10,635.55
Total.....	2,439	6,345	2,919	2,779	\$28,702.26	\$1,656.91	\$118,291.88	\$148,651.05
<i>Amount of outdoor relief given by county commissioners in addition to above.</i>								
Rockingham.....	\$17,602.65							
Straford.....	9,876.27							
Belknap.....	377.00							
Carroll.....	1,193.00							
Merrimack.....	1,367.55							
Hillsborough.....	24,869.80							
Cheshire.....	78.00							
Sullivan.....	3,090.65							
Grafton.....	488.73							
Cos.	2,266.68							
Total amount of outdoor relief given in state by towns and counties.....								\$61,210.33
								\$200,861.38

*Number not given.

THE STATE INDUSTRIAL SCHOOL.

One of the greatest needs of the state at the present time is a separate industrial school for girls, or separate building for girls in connection with the present school, which at present shelters both boys and girls under the same roof. The boys outnumber the girls by more than four to one, there being 123 boys and twenty-seven girls, eighteen of whom are county charges fifteen years of age and under. Sometimes rebellious, wayward girls, instead of being committed to the Industrial School are sent to the Mercy Home, a most excellent private institution maintained in Manchester by the W. C. T. U., a detailed description of which will be found on page 109.

The New Hampshire Industrial School is a state institution, pleasantly situated in Manchester on an elevation of land overlooking the Merrimack river, about one mile from the railway station. The only building, with the exception of the barn and out-buildings, is a large brick structure four stories in height with a basement. This was erected in 1855, and was constructed according to the ideas of that time, with provision for all persons belonging to the institution under one roof. This arrangement gives but little opportunity for a proper classification of the inmates, and one of the urgent needs of the school at the present time is the erection of a suitable cottage where the girls can live, and be cared for by themselves. Placing them in another building would leave sufficient room in the present one for the smaller boys to be completely separated from the larger ones. Many of the younger boys are mere children, and the chance of their being thoroughly reformed and eventually becoming useful citizens, depends in a very great degree upon their entire removal from the unwholesome influence of older and more vicious companions.

The daily routine of the school consists of four hours' work in the various departments in the morning, five hours in the schoolrooms in the afternoon, and the remainder of the time for meals, reading, recreation and sleep. In the sum-

mer a vacation is given, and the children are not obliged to attend school. The boys' schoolroom is a large pleasant room, 60 x 40 feet, well heated, lighted and ventilated, with prettily tinted walls, and appropriate pictures. Two competent teachers are employed to instruct them. There are one hundred and twenty-three boys in the school, ranging from the primary to the high school grade, some being unable either to read or write, and some being well advanced in their studies. It is needless to state that there is too much work here for two teachers to accomplish satisfactorily. The girls' schoolroom is on the upper floor, and they have one teacher for their instruction. Vocal lessons are furnished for those who have any taste for music.

The boys are employed in a hosiery mill, a large room supplied with the apparatus necessary for the manufacture of stockings. There is a dye-house in connection with this industry, and the boys are taught to mix dyes and to color the fabrics. The girls receive a thorough training in all kinds of sewing, and housework. The sewing-room is on the third floor, and is pleasant and sunny. It has lately been provided with three new sewing-machines. A seamstress is constantly employed, and with the assistance of the girls does all the sewing for the institution. She also acts as sewing teacher, and in the summer is assisted by a special teacher who instructs the girls in fine needlework.

Across the hall from the sewing-room are the hospital rooms. They are large, airy, and sunny, and are well equipped for all ordinary cases of sickness. A hospital room, with a bath-room and nurse's room in connection with it, has been fitted up in the attic for cases of contagious disease.

The boys' dormitory is a very large room, and at one end is a balcony where the smaller boys sleep. There are too many in this room, and if the boys could be classified, as has been suggested, there would be no need of this crowding. Every bed has a good mattress, two sheets, a pillow, pillow case, white spread, and the necessary blankets. The girls' dormitory is on the floor above, and throughout both dormitories the order and cleanliness were noticeable.

The kitchen where the cooking for the boys is done is in the basement, and the one where the food for the superintendent's family and the girls is prepared, is on the first floor. The boys, under the direction and with the assistance of some of the officials, have greatly improved the kitchens and pantries by building convenient closets and by enlarging the refrigerator so that a suitable place has been provided for the milk and butter. In fact, their handiwork is seen throughout the building in convenient lockers, shelves, etc., which have been constructed by them. New ceilings should be provided in the basement, and in the kitchen and pantry on the first floor. Every effort is made to keep them in good condition, whitewash being frequently and liberally applied, but they are too old to be permanently benefited by the attempts made for their improvement. The laundry, which is supplied with a mangle, a washing-machine, set tubs, etc., is modern and convenient. In connection with it is a large drying-room heated by steam, which is used in winter.

The most important consideration in the management of all reformatories, and especially those for young offenders, is to instill into the minds of the inmates the idea that it is possible to retrieve past errors, and that when the time for leaving the institution arrives they may go out into the world with the hope of an honest career, instead of simply graduating from one reformatory to enter another. As a means to this end the merit system, which has proved its value in some of the best institutions of this class in the country, is strongly advocated. The gaining of the "Honor" badge, and the certainty of consequent parole on the superintendent's recommendation, is a powerful incentive to good behavior.

The superintendent and matron, Mr. and Mrs. Robinson, desire to make the State Industrial School a model institution of its kind, and would welcome any measures tending to that end.

A table showing present number and division of inmates is appended. The counties pay \$1.50 per capita per week for their charges.

Total number of inmates in the State Industrial School,
October 1, 1902:

Boys, 123; girls, 27. Total	150
---------------------------------------	-----

Of this number sixty-eight are county charges, as follows:

Number of county charges fifteen years and under:

Boys, 16; girls, 2. Total	18
-------------------------------------	----

Number of county charges over fifteen years:

Boys, 45; girls, 5. Total	50
-------------------------------------	----

Total number of county charges	68
--	----

THE INSANE.

As the State Board of Charities has no supervision over the State Hospital for the Insane, it can only report upon the conditions of the insane in the county almshouses.

Eight of the ten counties support their chronic insane at the county almshouses. Ever since the fire of 1893, when forty-one out of their forty-four insane paupers lost their lives, Strafford county has maintained all its indigent insane at the State Hospital, and Merrimack county has done the same since the fire of November, 1901, which in this county happily did not result in any loss of life.

The proportion of insane, feeble-minded and epileptic in the remaining county farms is very large. As already noted in our remarks upon almshouses, it is shown by Table VIII, p. 57, that six hundred and eighty-seven out of the total of one thousand six hundred and thirty paupers maintained at the county farms during the year were there by reason of insanity, feeble-mindedness or epilepsy. As to the care they receive we cannot do better than quote from our last report as there has been no change. (Page 54, Report of 1900.) "The treatment of these insane paupers is purely custodial—there is no resident physician and no trained nurse employed at any county farm in the state. They are classed with the other paupers, receiving exactly the same food and

general treatment, and though generally kept in separate buildings, no separate expense account is maintained. No one could visit the ordinary insane departments of our county farms without being convinced that some radical change should be made at once in our methods of caring for the indigent insane. The same conditions prevail now in several county farms that prevailed in Strafford county before the fire, and the same terrible results might occur at any time.

“This board believes that the county commissioners of the state and the county farm superintendents do the very best they can, with the means at their disposal, for these unfortunate people. Were they to employ trained attendants and expert medical advice, public opinion in their counties would be overwhelmingly against them on account of the extra expense involved. The blame for the matter lies deeper than in any official board, it rests with the public who support and commend almshouse care for insane paupers. And until the public is educated to see for itself the evils of the present system, the county commissioners are helpless.”

It is now generally conceded everywhere by the best authorities that the state is the smallest unit that can properly assume the care of the indigent insane. The present system existing in New Hampshire is at variance with the system of nearly every state in the Union, and the Board of Charities is unanimously of the opinion that laws should be enacted by the present legislature abolishing county care for the insane, and providing for the care and treatment of all at the expense of the state. Should this policy be adopted, even if it were thought best to provide gradually for the change, the counties would be relieved of the expense of providing new buildings or enlarging the present accommodations at the county farms, and the people of the state would feel that New Hampshire was doing her whole duty toward the most unfortunate class of her dependents.

CONCLUSION.

In summing up, the board wishes to call especial attention to the many statistical tables presented in this report and the mass of general information regarding the charities and corrections of the state presented, never before available. It would not have been possible to collect and collate all this matter but for the generous provision made by the last legislature for salaried assistants to the board, and we hope the value of the present report will justify this expense in the eyes of the taxpayers of the state, if any feel that such justification is needed.

To His Excellency Governor Jordan and the honorable council, to the other state officers, to the county commissioners and to the general public, the board wishes to return sincere thanks for their constant and hearty support at all times.

Respectfully submitted,

LILIAN C. STREETER, *Chairman.*
ELLA L. FOLLANSBY,
O. J. M. GILMAN,
JAMES F. BRENNAN,
SHERMAN E. BURROUGHS.

WILLIAM J. AHERN, *Secretary.*

NEW HAMPSHIRE ORPHANS' HOME.

This home was incorporated by an act of the legislature in June, 1871, and the main object of its incorporation, as set forth in its charter is, "To provide a home for the destitute orphan and homeless children of this state; to furnish substantial aid for them by feeding and clothing them, by teaching them habits of industry, by giving them moral and intellectual improvement, and finally, as far as it may be possible, to seek out for the objects of our charity, suitable permanent places of residence where they may receive wages for their labor, and ultimately become useful members of society, and consequently be saved from pauperism, vice, and crime."

In August, 1871, the Daniel Webster farm, so called, in Franklin, was purchased, and the home was opened the following October. The farm originally contained two hundred acres, and was owned by Daniel Webster for many years. The old part of the present administration building was occupied by him and his family, so the place not only has its own intrinsic value but a historical value as well. The acreage has been increased during the past year by the purchase of an adjoining farm containing twenty-five acres with the buildings thereon. The object of this purchase was principally to secure a water supply which will prove of great value to the home. The land is fertile and the farm is under the management of a capable farmer. The boys who are large enough to assist, work on the place.

The steadily increasing numbers of children admitted to the home from year to year have called for larger and better accommodations, and the following buildings have been erected from time to time as necessity demanded: "The Mack Building," "Nursery Building," "Creighton Hall," "Primary School Building," and the "John Kimball Chapel." These buildings are constructed of brick, and are heated by steam and lighted by electricity.

The Mack Building is the oldest, and is used exclusively for the boys. Here are their dormitories, schoolroom and play-room. Besides these, are the sewing-room, reception-room, and nine other rooms which are used by the manager of the building and her helpers.

The Nursery Building was dedicated in October, 1893, and was occupied about the first of November of that year. The smaller children are cared for in this building. The kindergarten department, consisting of the schoolroom, sewing-room, lavatory, etc., is on the first floor. About thirty children can be accommodated in this department, and their ages range from three to seven years. The nurseries for the children under three years of age, the first and second babies as they are termed, are on the second floor. They are in charge of two nurses during the day, and at night, if needed, they receive the care of a night nurse. Opening from these nurseries is a piazza extending the whole length of the building, and enclosed with windows for protection in inclement weather, so the babies can be taken out in winter as well as in summer.

Creighton Hall, a fine new building named for Susan Creighton, was erected in 1899. One half of the basement of the building is used for a kitchen where the cooking for the children is done; the remaining part is to be fitted up for a gymnasium, and will have all modern apparatus. On the first floor is a large dining-room where all the children eat, with the exception of the first and second babies. The family dining-room is back of this room. The rest of the house is used for the girls, and contains their dormitories, wardrobes, etc., exceedingly pleasant, well arranged rooms.

The Primary School Building has been erected during this past year. The basement, which is light and dry, is to be used for a play-room for the children, and the second floor is devoted to school purposes. It is proposed to have a graded system from the kindergarten to the ninth grade inclusive. The dormitories are on the upper floor.

In all these buildings are bath and toilet rooms, furnished with modern plumbing and kept in good condition. In 1901, a new sewer was put in, carrying the sewage a distance of 1,450 feet to the Merrimack river.

A small chapel, with a seating capacity of two hundred and twenty, has also been built during the past year. This is called the "John Kimball Chapel," named for the treasurer of the Home, to whose skilful and careful management of the funds of the institution ever since its organization, its present exceptionally good financial condition is mainly due.

Under the chapel is a large room, which is to be fitted up for manual training classes. The establishment of this department is one of the progressive steps taken by the new management, and promises to be fruitful in good results. Ours is a strenuous age, and in no way can the skilled workman, demanded by the close competition in all branches of industry, be so surely secured as by giving him in childhood and youth the benefit of thorough manual training.

The present superintendent and matron, Mr. and Mrs. Gardner, took charge in September, 1901, and they are proving themselves the right ones in the right place. The Board of Charities would especially commend Mr. Gardner's energy in placing out children in homes—upwards of fifty having been so placed since he came. In addition to Mr. and Mrs. Gardner, Mr. and Mrs. Congdon are employed as assistant superintendent and matron, and Miss Colby as private secretary. Then there are three teachers, four managers,—one for each building,—three nurses, two seamstresses, two cooks and a laundress, a head farmer and assistant farmer.

Many improvements have been made during the past year. The superintendent's home has been thoroughly repaired; electric lights have been installed in all the buildings; the schoolroom, sewing-room and reading-room, together with the lower hall in the Mack Building have been painted and new hardwood floors laid; the barn has been entirely rebuilt, and a central heating plant which will contain coal pockets, laundry and boiler-room, is being built in the rear of Creighton Hall.

The home now accommodates one hundred and thirty-eight children from six months to sixteen years of age. No child is received free—either the county, city or some individual must become responsible for its board before it can be admitted.

Since this home was established in 1871 it has been the recipient of many legacies from philanthropic people interested in the care and welfare of dependent children. With a permanent fund of \$125,856, the New Hampshire Orphans' Home at the present time is the most richly endowed orphanage in the state, and the management is in the enviable position of having no cause for anxiety as to available funds.

The following is a list of the officers of the Home :

President, Hon. Virgil C. Gilman, Nashua.

Vice-President, Hon. George A. Cummings, Concord.

Treasurer, Hon. John Kimball, Concord.

Secretary, Hon. Willis G. Buxton, Penacook.

Auditor, James Minot, Esq., Concord.

Superintendent, Rev. Rufus P. Gardner, Franklin.

Matron, Mrs. Belle B. Gardner, Franklin.

MANCHESTER CHILDREN'S HOME.

The Manchester Children's Home is a commodious building, situated at the corner of Webster and Walnut streets, in Manchester, in a spacious enclosure containing about two acres, a part of which is used as a playground.

The reception-room and office are on the right as one enters the building. These rooms are attractive, with pretty pictures and rugs, and are neatly furnished with wicker furniture. The dining-room is opposite the reception-rooms, and contains three or four tables for the children and one for the matron and her assistants. The children are served first. They have good wholesome food and all the milk they care for. The kitchen is a large room, with two pantries opening from it, and is well supplied with all necessary utensils. A

new steel ceiling has lately been provided, the walls have been painted, and the room looks neat and clean. The children's sitting-rooms are large sunny rooms, having a southern exposure. In one room is a piano recently given the home by a man interested in its welfare. Next to the girls' sitting-room is the day nursery, where the younger children are cared for by one of the assistants. About one hundred books for children, which have been given by friends, are in the library, and are much enjoyed by those old enough to read. On the second floor are two large dormitories (one for the boys, the other for the girls), a night nursery, the matron's rooms, and the hospital room for convalescents. On the third floor are the sewing-room, the linen closet, the reserve closet, and the hospital rooms used for contagious diseases. These hospital rooms have a bath-room connected, and can be completely isolated, if necessary. The laundry is in the basement, and has three set tubs, a large boiler, and a mangle. The house contains eighteen rooms, is lighted by gas and heated by steam.

This orphanage has accommodations for about fifty children, and this is the average number to be found here. On the day of the visit to the institution there were forty-eight, twenty girls and twenty-eight boys. The inmates include both orphans and children of dissipated and neglectful parents, and are taken between the ages of two and nine years. An effort is made to place as many children as possible in good family homes. The children go to the public schools, and attend St. James Methodist church, that being the nearest to the orphanage. A nominal sum per week is charged for the board of most of the children, but some are kept at the home free of expense. The endowment fund being small, the regular expenses are met largely by amounts paid for the children's board and by contributions. All the Protestant churches in the city are interested in this orphanage, and give something for its support. Each society furnished a room in the home, and all have done a great deal for its welfare. Dr. Watson is the attendant physician, and his services are given. This home was founded in 1884,

taken in charge by the women of the churches in 1885, organized as a voluntary association in 1886, and in 1897 was incorporated under the laws of New Hampshire. The governing body consists of fifty directors, representing each Protestant society in the city. All applications for admission should be made to the president, Mrs. Josiah Carpenter.

The officers are as follows:

President — Mrs. Josiah Carpenter.

Secretary — Miss Maria Kidder.

Treasurer — Mrs. Frank Sargent.

Superintendent — Miss Emma Gutterson.

Assistant Superintendent — Mrs. Ann Fraser.

ST. PATRICK'S ORPHANAGE FOR GIRLS.

In 1873 the Harrison estate in Manchester, at the corner of Hanover and Pine streets, was purchased for the purpose of accommodating the increasing number of children who had been cared for up to that time at a small orphanage located at the corner of Laurel and Beech streets. The original house was large, and additions have been made from time to time, as necessity demanded. It now contains thirty-two rooms, besides the basement, and accommodates one hundred and twelve girls.

There are two attractive reception-rooms on either side of the front hall, one for the use of the children and their friends, and the other for the use of the sisters. Back of the children's reception-room is the community-room for the use of the sisters, and in the rear of this room is the sewing-room where all the clothes for the children are made.

The schoolrooms, three in number, are on the east side of the house. One of these rooms is used for the kindergarten grade, and the other two for grades ranging from the first to the grammar grade.

There are accommodations for about forty-eight in each of these rooms. School was in session at the time of the visit

to this institution. There is no appearance of the "charity child" about them, they are simply bright, well-cared-for, happy looking children.

In the two upper stories are the dormitories. The children have single white iron beds with springs. The rooms are light, well ventilated, and apparently very comfortable, being cool in summer and well heated in winter.

The general lavatory for the girls is in the basement, but there are seven or eight set bowls throughout the dormitories. There are five bath-rooms and eight water-closets, all well fitted with modern plumbing. The house is heated by steam and lighted by gas. One boiler supplies the heat for both St. Patrick's Orphanage and St. Joseph's Boys' Home. The play-room is in the basement, as well as the dining-rooms, the kitchen, storerooms, etc. A piazza, ninety by eight feet has lately been built on the west side of the orphanage. This sheltered and roomy space is greatly enjoyed by the children.

The diet is good, and to give an idea of the amount of food which has to be prepared, attention was called to twenty-two pans of bread, each pan containing eight loaves. There are five bakings during the week, and each one calls for more than a barrel of flour. During the year about two hundred tons of coal are used. These facts are mentioned simply to illustrate the amount of money which has to be given annually to carry on this institution, the orphanage having no permanent fund, and being dependent for its existence upon the small amounts paid for the board of some of the children and upon charity. This orphanage is under the charge of the Sisters of Mercy. Sister Legoura is the Sister Superior.

ST. JOSEPH'S BOYS' HOME.

This institution is situated in the central part of Manchester, on the corner of Amherst and Pine streets, and is the rear building of the dual establishment of St. Patrick's Orphanage for Girls and St. Joseph's Boys' Home. Both orphanages are under the care and control of the Cathedral Parish. This home is designed for the protection and education of neglected and deserted boys, who are taken between

the ages of two and three years and kept until a proper home can be found for them or until they are old enough to go to work. The sisters do not lose sight of them after they leave the orphanage, but continue their kindly care of them so long as may be practicable or needful.

The building was first occupied in 1888, and has accommodations for about one hundred and forty boys; at the date of the visit there were one hundred and twenty-three present. It is a large brick structure, well heated, lighted and ventilated, and the plumbing throughout is modern and in good condition.

The kitchen, dining-rooms and lavatories are located in the basement, and the cooking for this institution is done in the same kitchen and in connection with that done for St. Patrick's Orphanage. Two small, well furnished reception-rooms at either end of the front hall are provided for the use of the sisters and for the children and their friends. Between these reception-rooms are two large schoolrooms fitted up with all the necessary equipment for school purposes. A bookcase containing one hundred books for children is at the end of one of these rooms, and standing near this is a good piano. The school, taught by the sisters, contains all grades from the first to the sixth.

Two large sewing-rooms, each forty by twenty feet, are on the other side of the hall. They are furnished with sewing-machines, etc., and are provided with large and convenient closets where are kept the children's clothes as well as the materials from which the garments are made. One of these rooms is used for a play-room for the smaller boys when they are unable to be out-of-doors.

Inspection showed the dormitories, three in number, to be clean and orderly, and the bedding in good condition. The infirmary is a large, airy, pleasant room, containing eight beds. Up to the present time there has been very little sickness at this orphanage, and the good health enjoyed by the children is a great blessing. Dr. Cullity is the regular physician.

The chapel, which is large enough to seat about three hundred persons, is on the second floor. It is finished in cherry and with its appropriate furnishings makes a most desirable assembly-room. Father J. J. Brophy is the resident chaplain, and mass is said every morning for the children of both orphanages.

This home, like St. Patrick's, depends for its existence upon charity and the small sums that are paid weekly for some of the children.

Sister Elizabeth is the Sister Superior.

HOSPICE ST. VINCENT DE PAUL.

This orphanage is located on Lake avenue in the central part of the city of Manchester. It is connected with the parish of St. Augustine in care of Father Chevalier.

In 1892 a private residence with a large lot of land 100 x 100 feet was purchased, and the orphanage was commenced with twelve little girls. The house has been enlarged from time to time until it now has accommodations for one hundred, and that was the number being cared for at the time of the last visit. It contains dormitories, schoolrooms, recreation-rooms, lavatories and chapel, and is well heated, lighted and ventilated. In the basement, are the kitchen, laundry, and boys' dining-room. The girls' dining-room is on the floor above, and an elevator from this room to the kitchen is a great convenience. The sisters perform all of the household duties, and the older girls assist in the kitchen, laundry and bakery work, according to their age and capacity. In no orphanage visited has there been found greater cleanliness and order than here. The dormitories seemed especially clean, and the bedding was immaculate. The girls and boys each have a playground with swings, toys, and other means of amusement.

French is the language generally spoken in this orphanage. The children do not attend the parochial school, but receive

their education from the sisters in the orphanage, and are taught both French and English. They attend St. Augustine's church.

This home is designed for the reception and care of orphans, and homeless and destitute children whose parents are of the Catholic faith. It is supported wholly by the offerings of charity, and is in charge of the sisters of charity. Sister M. Christine is the Sister Superior.

NOTRE DAME DE LOURDES

AND

ST. PETERS' ORPHANAGE.

In December, 1885, the idea of an orphanage for girls alone was put into practical operation, the sisters in charge commencing with two girls. The number increased until it became necessary to provide more commodious quarters than were then provided, and in 1893, ten lots of land in all, five hundred by two hundred and fifty feet, were purchased, situated at the corner of Beaufort and Wayne streets in Manchester, and the present orphanage buildings erected. As time went on the question of caring for homeless boys had to be considered, as there were so many needing a home and protection, and it was decided to admit them as well as girls to Notre Dame. For quite a number of years this has been done, and the sisters have succeeded in providing for both; but the numbers increased so rapidly that last summer it became necessary to make other arrangements, and it was decided to provide another orphanage in a more retired section of the city for the larger boys. Accordingly, a home, which will be conducted on the same plan and which in every way will be as comfortable as Notre Dame, has been established on Alsace street, West Manchester. It has a large lot of land in connection with it for playgrounds, and is called St. Peter's Orphanage. All the boys over nine years of age have been placed there, and this transfer has greatly relieved the crowded condition of Notre Dame de Lourdes.

In addition to the orphanage of Notre Dame, the institution includes a hospital, and a home for aged women. The orphanage building is of brick, and contains eleven rooms. In the first ward, accommodating fifty-six of the older girls, are three dormitories; in the second ward, devoted to the use of the younger girls ranging from three to seven years of age, are two dormitories; and the third ward, occupied by the boys, has two dormitories. Each ward, which is under the supervision of two sisters, has its own dining-room. One of the sisters in charge is always present throughout the meals. The dining-rooms for the girls are on the upper floor, and that for the boys is on the second floor, and these rooms are connected with the kitchen by elevators. No cooking is done in the orphanage building, the institution kitchen being in the basement under the hospital. On each floor there are large play-rooms for the children, and opening from these are three large piazzas seventy by twenty feet. Besides this provision for exercise and recreation there are playgrounds and a large garden. As a provision in case of illness there are infirmaries, one in each ward for girls, none being as yet furnished for the boys. The staff of physicians connected with the hospital is called upon when medical attendance is needed. The water is the regular city supply, and the building is heated by steam and lighted by electricity. Each ward has a bath-room, and the girls' dormitories are supplied with set bowls and faucets. The plumbing is excellent, and the fittings both for baths and water-closets, of which latter there are nine in the building, are of modern and approved design. The laundry is furnished with four set tubs and three boilers, besides the great boiler that furnishes power for the mangle. With the large amount of laundry work necessary in such an establishment, the need of this well appointed laundry with its set tubs, starching rooms, mangle, etc., is apparent.

The labor and expense of operating such an institution as Notre Dame is great. Children are always taken whether anything is paid for their board or not. On the day the institution was visited there were twenty children for whom no remuneration was received.

The children receive religious instruction at St. Mary's church, and besides the secular school work, the sisters teach singing, and enliven the routine work with little plays and simple entertainments of a similar nature. A good kindergarten is maintained for children under six years of age.

The amount received for the board of the children is comparatively insignificant, and the orphanage depends for its life upon yearly contributions. It is a significant fact that the faith that their wants would be supplied, shown by those who undertook this work, has been amply vindicated, and thus far a wonderful prosperity has attended the institution.

The orphanage accommodates about one hundred and thirty children, and is under the charge of the Gray Nuns. Sister Perras is the Sister Superior.

OUR LADY OF PERPETUAL HELP INFANT ASYLUM.

This institution was opened by the Sisters of Mercy on January 6, 1902, and is under the direct supervision of Sister Ursula as Sister Superior, with three sisters and four nurses to assist her. It is situated on Amherst street, Manchester, in connection with the Hospital of the Sacred Heart, and has accommodations for fifty babies, in three wards, one for the wee ones, just born — for it receives some less than a day old; one for the year-old babies; and one for the older ones. When a child reaches the age of three, it is transferred to a home or orphanage. At present the institution is caring for twenty-three little ones, for one third of whom nothing is paid. The regular charge for those who can pay is two dollars per week, but Sister Ursula absolutely refuses to make it an infants' boarding-house, and will not receive any babies whose parents are living. She has refused to admit nearly a hundred such cases since the asylum was opened. She does not admit the children of deserted wives either, except in extreme cases, because she thinks the thought of the child is often an incentive to a man to return to his home, and thus the permanent breaking up of the family is prevented.

Of this institution one cannot speak in terms of too high praise. In the first place, the work it does is unique in the state, for it is the only infant asylum we have. Heretofore it has been so difficult to find places for these helpless little ones, that it would be a blessing to have the home, even if it were not so well managed as it is, but in it we seem to have an almost perfect infant asylum. Every sanitary and hygienic precaution is taken, every appliance for comfort or health is provided, the most spotless cleanliness prevails, and the place is full of an atmosphere of conscientious, loving devotion to the little ones.

ST. MARY'S ORPHANAGE FOR GIRLS, DOVER.

St. Mary's Orphanage for Girls, in the city of Dover, was established in 1888, and is in charge of the Sisters of Mercy. It is located on Court street. The building, containing fifteen rooms, is of wood, and is three stories in height. It is heated by steam and lighted by gas. The sitting and sewing-rooms occupy the space in the front of the house on the first floor, with the recreation-room, dining-room and kitchen in the rear. Over the sitting-room on the second floor is the chapel, and directly back of this is a large room containing three beds, which can be used for hospital purposes when required. The dormitory for the younger children on this floor is a large room, well heated, lighted and ventilated, and contains eighteen single iron bedsteads. At the time of the visit the bedding was clean, and the general appearance was that of neatness and good order. Opening from the dormitory are the bath-room and lavatory. The larger girls sleep on the floor above, and their dormitory is the same in size and arrangement as that for the younger children.

The orphanage commenced with ten girls, and the number has increased until at the present time there are twenty-four, ranging in age from three to fourteen years. This is the average number, although previously as many as forty-four

have been accommodated under crowded conditions. The larger girls attend the parochial school, and the smaller ones are taught in the orphanage by the sisters.

Sister Felicitas, who is the Sister Superior, has had charge for the past five years, and she takes an active interest in the welfare of these children, not only while they are with her but after they leave the home. The girls are taught sewing, and to assist the sisters in performing the household duties.

The institution is under the care of St. Mary's church. It has no permanent fund, but depends for its existence upon public charity, and upon the small amounts paid for the board of some of the children.

DOVER CHILDRENS' HOME.

One of the most homelike and attractive orphanages in our state is the Dover Childrens' Home. The officers of this institution exercised careful thought and good judgment in their selection of a pleasant and accessible location, and in their expenditure of money in the erection of a substantial brick building. The house contains nineteen rooms, and is well planned for the purpose for which it was erected. As one enters the hall, the reception-room is the first room on the left, a small room neatly furnished, and containing, among other things, a register of the visitors to the institution. Back of this room is an assembly-room for the children's use in gatherings for instruction and amusement. The sewing-room is next, and is sunny and pleasant. The large amount of mending necessary to keep clothes in repair in such a large institution was evidenced by the heaped-up baskets waiting for the needles of the women who attend to this branch of the work. The little girls are here taught their first lessons in sewing. On the right of the hall, and opposite the reception-room, is the long dining-room. The time of the visit to this home happened to be the noon hour, and the happy and contented little faces appearing above the clean and well supplied tables, made the dining-room especially pleasing.

The kitchen, connected with this room by a good-sized china closet, is large, airy, clean, and well furnished. In the basement, which is apparently perfectly dry, is the laundry, with set tubs and all necessary conveniences. In connection with this laundry is a drying-room, which is used in the winter for drying the clothes. Farther along on this floor is the boys' play-room. The second story and part of the third are used for sleeping apartments. The single white beds, the light, well ventilated rooms, and the general cleanliness, made the visitor feel that the children in this home are well cared for by night as well as by day. Part of the third story can be used for hospital purposes if necessary. The house is well plumbed, is heated with steam and lighted by gas.

This home was founded in 1892, and incorporated in 1893. It accommodates forty children, both girls and boys. The object is to provide for the "reception, care and education of destitute children." The children go to the public schools, and attend the First Parish (Congregational) church. They have the appearance of belonging to a happy, well organized family. In their daily contact with the other children in the city, both in school and church, they are evidently not made to feel in any way that they belong to an institution, and must on that account assume a dependent attitude.

The amount of the permanent fund of this institution, according to the treasurer's last report, was \$11,100. The income from this fund is small, and the provision for the care of these orphans comes principally from small sums paid for the board of some of the children, from membership fees, and from voluntary gifts. The Women's Clubs of Dover and Somersworth, the Girls Friendly Society, the churches, and the citizens, all contribute something yearly for the support of this most worthy object, and to their kindness, and to the good management on the part of the officers, is due the successful operation of one of the pleasantest orphanages in the state.

The following is a list of the officers :

President — Mrs. Susan E. Young.

Corresponding Secretary — Mrs. Ellen F. Carter.

Recording Secretary — Mrs. Annie C. Morrill.

Treasurer — Mrs. Mary F. Morrill.

Matron — Mrs. Kate M. Burnstead.

THE KING'S DAUGHTERS' NURSERY AND CHILDREN'S HOME.

In 1894 the King's Daughters' Benevolent Association of Nashua rented a dwelling-house on Amherst street, and started a day nursery. The object at first was to furnish a clean and wholesome place where children could be cared for while their mothers were employed during the day. The work gradually increased until it was decided to change it from a day nursery to a children's home, and this has been done.

The location of the house, which stands at a distance from the street, with a comparatively large area of land surrounding it, furnishes the children with a delightful playground, and gives almost the freedom of country life. The house is heated by stoves and lighted with kerosene. On the first floor are a parlor, sitting-room, dining-room, kitchen and bath-room, and up stairs there are six sleeping-rooms and a play-room. Five boys sleep on the third floor. The sitting-room and parlor are pleasant rooms, neatly furnished, and seem homelike. In the dining-room all the children sit at one table and are served by the matron and her assistant. The kitchen is a very small room, and seems hardly large enough for the work which must be done in it.

The number of children present in July, 1902, was sixteen, but the home has a capacity for twenty. The majority of the inmates are partially supported by relatives and friends, and the county of Hillsborough and city of Nashua pay for four. The children are placed out in family homes as opportunities

present, great care being exercised to prevent placing in any but well recommended families. The children go to the public schools, and attend either the Episcopal church or the Pilgrim Congregational church. The girls are taught to sew, and they assist in doing the light housework. Part of the clothing required by the children is supplied by parents or other relatives, more or less is contributed by friends of the home, and whatever is lacking is furnished by the King's Daughters, who do most of the sewing for the institution, or employ seamstresses for whose wages they are responsible. This is a very pleasant, homelike orphanage which is doing great good in a small way.

The sources of income are from the association, city, King's Daughters' Circles and citizens. The receipts for the year ending December 31, 1901, including balance on hand at that date, was \$1,885.32. The home has no endowment fund.

The following is a list of the officers:

President, Mrs. Lucette H. Blunt.

Secretary, Mrs. George E. Balcom.

Treasurer, Mrs. John K. Hall.

Matron, Mrs. Elizabeth Larrabee.

Assistant-Matron, Mrs. Jennie Booth.

ST. JOSEPH'S ORPHANAGE, NASHUA.

St. Joseph's Orphanage in Nashua is located on Main street, and is under the auspices of the Gray Nuns. It is about half a mile from the Nashua Junction railway station, and is on the South Main street line of the electric cars.

In the latter part of 1900, Father Millette purchased a fine old house with a large lot of land in connection with it, and had certain alterations made, which would render the house suitable for an orphanage. The home was opened April 9, 1901, and during the short time of its existence the number of children applying for admission has been so large

that this last summer it was decided to build a new building to accommodate them. This new part is not yet ready for occupancy, and will not be until next March. It is built substantially of brick, three stories in height, and is one hundred feet long and fifty feet wide. In the basement are the kitchen, three dining-rooms, storerooms and pantries. On the first floor are five rooms—the parlor, sewing-room, a large classroom where seventy-five to one hundred children will be taught in the kindergarten and primary grades, and a dormitory and dining-room for the help who are hired to assist in the work of the orphanage. The second floor is the boys' floor, and is entered from a hall and stairway that are used only by them. They have one large dormitory, fifty feet long and thirty feet wide, and opening from this is a room which is furnished with a long sink and basins where they can perform their toilet. Beyond this is a bath-room and water-closets. A small room has been fitted up for use when a child is not well enough to sleep in the dormitory and is not sick enough to be taken to the hospital room. The boys have a play-room the same size as their dormitory, and opening from this is a large piazza ten feet wide and fifty feet long. The third floor is for the girls, and is the same in its arrangement as the second floor.

The old house is very attractive, with hardwood finish throughout, fire-places, pretty mantels, and every indication of a once beautiful home. The reception-room is on the right of the hall as you enter, and on the left is the chapel. Back of the reception-room is the sewing-room, and in the rear of this are the sisters' dining-room and kitchen. The second floor is used for dormitory purposes, with the exception of one room which has been fitted up for a hospital room. Owing to the delay in finishing the new building, this house is very much crowded, and the sisters are anxiously waiting for the time when they can have proper accommodations. At present all of the children go to the parochial school and attend mass every Sunday at Father Millette's church. At the time of the visit there were eighty-five, forty-three boys

and forty-two girls, and out of this number there were twenty-seven for whom nothing was paid. Children are taken at the age of three years, though some as young as eighteen months have been admitted—this is not the rule, however. The boys are kept until they are twelve years of age, and then suitable places are found for them.

Although the establishing of this orphanage is a new undertaking, still the wisdom and necessity of it seem to need no argument. Father Millette has been indefatigable in his efforts to provide a home for homeless children, and his parish and other friends have given him substantial assistance in every way. Like so many other orphanages in the state, it depends for its existence upon voluntary contributions and upon the small amounts that are paid for the children's board.

Sister Deguire is the Sister Superior.

CHASE HOME FOR CHILDREN, PORTSMOUTH.

The Chase Home for Children was founded in 1877, incorporated in 1879 as "The Children's Home," and this name was changed to its present one July 7, 1881.

The house is a spacious, old-fashioned mansion, situated on the corner of Court and Washington streets, Portsmouth, with a large graveled yard at one side for a playground, where there is in one corner a sand heap for the younger children. The house stands flush with the sidewalk, and the generous, old-fashioned, paneled front door, ornamented with a brass latch and knocker, opens into a low, wide paneled hall in the centre of the house. Down stairs are the parlor, play-room, dining-room, kitchen and tiny laundry. Up stairs, on the second floor, are the boys' dormitory, matron's room and bath-room, and on the third floor are the girls' dormitory and a servant's room. On the dining-room table, the day of the last visit, were vases of flowers. The whole place has the atmosphere of a simple, happy home; everywhere great economy is manifest, but at the same time comfort and refinement, and the cleanliness is absolute.

The objects of the home, as given in their report, are as follows :

“ The reception of homeless children under twelve years of age, without distinction of creed or color, of the following classes :

“ 1. Motherless children, whose fathers, especially seafaring men, are obliged by occupation to be much away from home, who have no proper person to care for their children during their absence.

“ 2. Children of poor parents, obliged by long continued sickness to neglect their families, and who place their children for a season in our care, expecting on recovery to claim their own.

“ 3. Children rendered temporarily homeless by fire or other accident.

“ 4. Children whose home has been broken by intemperance or desertion of father or mother ; under such circumstances the parent remaining pays, according to ability, a certain sum at regular periods.

“ 5. Children left orphans, or abandoned by both parents, whose friends or relatives bring them temporarily to us while finding a proper home for them elsewhere.

“ To train the children to practical home duties, to encourage habits of honesty, truthfulness, purity and industry, to prepare them to take their positions in after life as useful members of society, to give a Christian home to those who otherwise would have perhaps no home at all, such are the aims and objects of the work.”

These are high aims, but they are conscientiously and thoroughly sought and practically attained. The home is an admirable one in every way.

The house accommodates twenty children, and is generally full, though on October 1, 1902, the date of this report, there were six vacancies. It admits no children under four years or over eight, and does not keep them after they are fourteen.

Only two county charges are in this home. Of the remaining number, the greater proportion are entirely supported by the home, though the parents and relatives who are able pay something towards the children's support, but this orphanage never refuses a home to a homeless child whether it receives any compensation in return or not.

It is supported by voluntary contributions from the citizens of Portsmouth, and at the present time has an endowment fund of \$13,007.04.

The following is a list of the officers:

President, Mrs. John Sise.

Secretary, Miss Mary L. Varrel.

Treasurer, Miss Helen H. Langdon.

Superintendent, Mrs. Louise M. Davis.

ORPHANS' HOME, CONCORD.

This orphanage was the first one to be founded in the state, and for nearly six years was the only one. It was originally established to meet the needs of the destitute children orphaned by the Civil War. To quote from one of the reports: "In the spring of 1866, moved by a profound pity for the fatherless and destitute children to be found in the chief towns of the state, with 'no man to care for them,' so as really to provide for their misery and need, Dr. Henry Augustus Coit began the Orphans' Home.

"From the day when the first matron, with seven or eight little children, took possession of the house he had secured for the work, April 4, 1866, until the last week of his life, Dr. Coit carried the home in his heart. His interest in it and care for it never waned. He gave time, money, sympathy, counsel and pitiful concern year after year, as freely at the end as at the beginning. Engrossed as he was by grave cares and responsibilities, with every hour of his day filled up with the important duties of his office, he still found or made opportunities for constant visits, for watchful supervision of all details, and was never too busy to give a hearing

to those who had the charge of the institution, and to aid them by counsel, by sympathy, and when necessary supply their needs from his own purse.

“Wonderful was his compassionate interest in the children. He knew them all by name, the history of each one, the traits and character of each one, and not a month passed without tokens coming from him of deep and tender regard for them. He himself looked after their religious instruction, baptized them himself, and for many years prepared the older ones for confirmation and the Holy Communion.”

The Right Rev. W. W. Niles, D. D., bishop of New Hampshire, is now the president of the board of trustees, and the home is a diocesan institution. It can accommodate forty-two children, and on October 1, 1902, was sheltering thirty-eight little ones, two of whom were county charges. The home does not receive children under three years of age for it has no facilities for taking care of them.

The main buildings are of brick. On the ground floor of the central or girls' building are the reception-room, ladies' sitting-room, the dining-room and kitchen, and above are three bed-rooms and the girls' dormitory and bath-rooms, very clean, sunny and pleasant rooms. In the cellar is the laundry, which is very primitive. A thoroughly fitted up modern laundry would be a great help in carrying on the work of the home, and would in the end pay for itself by the saving effected.

Connected with the main building by an enclosed cloister is the boys' building of brick, built in 1897. On the ground floor of this building are the common room, caretakers' rooms and the nursery, where the eight little boys from four to eight years of age spend their time under the charge of a special caretaker. On the second floor are the bright sunny dormitories for the boys and their bath-room.

On the third floor is the beautiful little Chapel of the Good Shepherd, very completely fitted up. Every morning the whole household assemble here while the matron reads prayers. Services are held every Sunday afternoon by the chaplain of the home, the Rev. John Knox Tibbits, who also celebrates the Holy Communion every Wednesday morning.

.

East of the central building and connected with it are the original buildings of wood, in which the home began its life thirty-six years ago. On the ground floor is first the schoolroom, and next to it a large room used for a work-room, the manual training room for the boys. They are taught by the manual training teacher of St. Paul's School, and do wonderfully good work, even making various things for sale, such as step-ladders, etc. This is the first orphans' home in New Hampshire to give its boys the advantage of manual training, and it is still the only one, though the orphans' home at Franklin will open a manual training room early in the new year.

The upper part of this building is very conveniently fitted up as an infirmary so arranged that in case of the outbreak of contagious disease the patients can be completely isolated.

The home is carried on by five women—the matron, Mrs. Moreland, who has been there eleven years; Mrs. Millard, the assistant matron, who has been there twenty years; two caretakers on the boys' side, and a teacher.

Only one servant is kept, whose work is mainly laundry work, and the children do the rest, thus receiving valuable training in every branch of household work, fitting them to go out to service when they are old enough, or to care properly for homes of their own.

The grounds about the home are large and pleasant, and include a delightful playground, and a flourishing vegetable garden which the boys take care of, with some help from the janitor.

Every influence about this home is good, and the lives of the homeless children whose lot is cast here have truly fallen into pleasant places. The atmosphere of refinement is strongly marked. We would especially commend the attractiveness of the tables, the clean cloth and napkins, and the fact that the tables are freshly set for each meal, instead of remaining ready for action all the time, as is customary in most institutions. The matron and assistants also have their meals in the same dining-room at the same time as the children, and

•

thus are able to exercise constant oversight over their table manners. The home is certainly very fortunate in those in charge.

They have very little money to carry on this home, and they need a great many things. They are obliged to deny themselves the comfort and convenience of a telephone, they have no sewing-room, and in the girls' building they have no common room or sitting-room, but are obliged to use the dining-room for that purpose. Their permanent fund is only twenty-five thousand dollars, yet they never refuse a home to a homeless child and more than once have taken in some little unfortunate for the Board of Charities who had been denied elsewhere.

ROLFE AND RUMFORD ASYLUM.

The Rolfe and Rumford Asylum in Concord is a private orphanage for young girls who are natives of Concord and motherless. It was established under the provisions of the will of the Countess of Rumford, who gave to it all of her real estate and a cash endowment of \$16,000. It was opened for the reception of beneficiaries January 15, 1880, and commenced with one little girl. Since that time its work has enlarged until at present it is caring for twenty, and no orphanage in the state is doing better work.

The house is a roomy, old-fashioned mansion with a large lot of land in connection with it. The interior is attractive in every way—the wide hall with its quaint wood trimmings, the old-fashioned low posted rooms, the pretty furniture, and the exquisite neatness of the whole, make this orphanage seem a veritable home. It is presided over by a matron and her assistant who are devoted to their work, and give the little ones the greatest care, attention and love.

On the first floor are the reception-room, the sewing-room, the girls' sitting-room, the schoolroom and the kitchen with its large pantries. The storeroom, laundry and ironing-room are in the basement. On the second floor there are nine sleeping-rooms, and two rooms with a bath-room in connection with them, which can be used for hospital purposes.

On the third floor are six sleeping-rooms besides a large room for clothes. The house is heated by steam and lighted with kerosene. There are three bath-rooms, and the plumbing throughout is first-class.

There are no large dormitories. Most of the children have separate rooms furnished simply but comfortably, and in them they have their own books, pictures and ornaments. In no sleeping-room are there more than two children, and this doing away with dormitories and giving the children rooms of their own is an ideal arrangement to be not only commended but urged in all orphanages wherever it is possible to accomplish it.

The ages of the children range from three to twenty years. The youngest child ever taken was two years and a half old, but the intention is not to take them under three years of age. They are kept until they are twenty-one, and then suitable places are found for them.

The children are educated at the home. Their schoolroom is a large pleasant room, and is well supplied with furnishings as good as are found in the city schools. A competent teacher is in charge and the children receive the best of instruction. They are also taught to do housework and are instructed in all kinds of sewing under the supervision of the matron and her assistant. They attend the First Congregational church.

As has been said, this asylum is a private orphanage. The children are taken, cared for, educated and lovingly watched over, without compensation, and the citizens of Concord have reason to feel glad that they have within their midst such a truly charitable institution.

AMERICAN SCHOOL FOR THE DEAF.

The American School for the Deaf is situated on Asylum avenue in the city of Hartford, Connecticut. This is the oldest school for the instruction of the deaf in America. The governing board consists of a board of directors with the governors and secretaries of state of the New England states as members of the board, *ex officio*.

In 1816 a charter was granted to sixty-three citizens of Hartford by the legislature of Connecticut, and under this charter the school was opened April 15, 1817. In 1819, the congress of the United States, upon motion of Henry Clay, gave to the school twenty-three thousand acres of public land, and with the proceeds of the sale of this land, grounds were secured, suitable buildings erected and a permanent fund provided. After the school was established, the legislatures of the New England states appropriated money to educate a certain number at this school. New Hampshire adopted this policy in 1819, appropriating at that time one thousand dollars annually.

The system for instruction is eclectic, both the sign and oral methods of teaching being employed. For developing the intellectual faculties and for the rapid exchange of thought, the instructors consider the free use of the sign language invaluable as well as the oral method.

Very early in the history of this school the need of manual training was recognized, and instruction in this branch was begun in 1822, the school being the first in this country to adopt this system of education. Boys receive instruction in sloyd, cabinet-making and shoemaking. Most of the girls learn to sew and to do the lighter parts of housework.

There are three grades, primary, intermediate and grammar. The building in use for the scholars of the intermediate and grammar grades is a long building four stories in height, and provides schoolrooms, dormitories and dining-rooms for one hundred pupils. This building has been in use a great many years, and the management and friends of this institution desire more modern accommodations, but the school is not heavily endowed, and it has been difficult to provide suitable new buildings. In 1900, efforts were made, and a building for the primary department was erected at a cost of \$85,000, which is a credit to the promoters. This provides modern schoolrooms, dormitories and dining-rooms for seventy-five pupils and their teachers. In this department the oral system is taught almost exclusively.

The directors have built a substantial brick building for the use of the boys engaged in manual training. A first-class workshop has been furnished on the first floor, and on the floor above is the room for the class in sloyd. Competent teachers are employed in this department, and the pupils show the result of their good instruction. Manual training, which is of great value to all children, is especially so to the deaf and dumb, and the statistics of this school show that the majority graduated here have become self-supporting citizens.

New Hampshire is educating eleven children here.

MAINE SCHOOL FOR THE DEAF.

The Maine School for the Deaf is a state institution, established by an act of the legislature, approved March 15, 1897. It first existed as the Portland School for the Deaf, and was founded in 1876. In 1895, the legislature purchased a large house on Spring street, in Portland, adjoining the building occupied by the Portland School for the Deaf. This house was enlarged to about twice its original size, and was used as a dormitory for the pupils of the Portland school. This arrangement of the state owning the dormitory and the city of Portland owning the schoolhouse, proved to be very inconvenient and unsatisfactory, and upon condition that the city of Portland would convey to the state, free of charge, its title in the schoolhouse and lot, the state assumed the entire charge, and thus provides for the education of all her deaf and dumb children.

There are accommodations here for one hundred pupils, and at the present time there are ninety-two attending the school. All the pupils are from Maine with the exception of four from New Hampshire. Both the sign and oral methods of instruction are employed.

The buildings consist of Brownson Hall, the school building, and a house which has recently been purchased. In Brownson Hall are the kitchen, dining-rooms, parlors and dormitories. In the school building are nine class-rooms for three grades, primary, intermediate, and grammar, and a room for manual training.

A year ago the school acquired the commodious residence adjoining Brownson Hall in which the girls are now comfortably housed. This building affords ample sleeping and living apartments for the girls, with pleasant playgrounds for recreation. There is also a convenient kitchen with pantry, closets, etc., where the girls are taught cookery, ironing and other duties of the household.

The principal, Miss Taylor, has had charge of the school for eight years. She is a woman of marked executive ability, is thoroughly trained, and shows moreover great natural aptitude for her position. Capable assistants are employed in all departments, including manual training.

This school compares most favorably with other institutions for the deaf, and the State Board of Charities feels that more New Hampshire children might be sent there to great advantage.

CLARKE SCHOOL FOR THE DEAF.

The Clarke School for the Deaf at Northampton is an ideal school. Its situation on a height of land overlooking the city is delightful. The buildings are modern, and the trees, shrubbery, and flowers make the grounds very attractive.

The school was founded in 1867, and was named for John Clarke, who endowed it with \$400,000. There are three departments, primary, intermediate, and grammar, each one constituting a distinct family and school, and being provided with a building fitted for its purpose.

The Gilmore Gymnasium was the last building to be erected, and was given to the school by the grandparents of one of the scholars. All of its appointments are complete. The lower floor has a fine bowling alley, cloak-rooms, instructors' rooms and lavatories. The second floor is the gymnasium proper, and is supplied with apparatus of the Swedish method and of the best grade.

The oral method of instruction is used exclusively, and the principal claims that this method can be successfully employed

with all intelligent deaf and dumb children having the sense of sight. The successful results of this method of teaching are apparent in the recitations, for the children understand and converse with ease. The girls are taught sewing, wood-carving and light housework, while the boys are taught sloyd, wood-carving and cabinet work. The results reached in this department of instruction are of great value. Some of our New Hampshire beneficiaries have reached a high degree of excellence in this work.

The state of New Hampshire pays \$225 a year for each of her pupils at this school. This amount, however, does not represent the actual cost per capita for each child. In order to furnish the advantages that are enjoyed by the scholars a much larger sum is required. It is claimed that since the school was opened, \$250,000 of the income from the endowment fund, in addition to the annual fees that are charged, has been expended for the benefit of the pupils. One hundred and fifty pupils can be accommodated, but the school is not large enough to meet the demands, for each year more applications for admission are received than can be considered.

This school ranks among the best schools for the deaf and dumb in the world, and much credit for its success is due to Miss Yale, the principal. She has been there thirty-one years, and has given her life's energy and thought to her work, and most wonderful have been the results. She has eighteen trained assistants.

Six New Hampshire children are being educated here, all that the school can receive.

PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND.

The Perkins Institution and Massachusetts School for the Blind has a world-wide reputation. It is a school purely educational in its principles and methods, and was incorporated for the instruction and training of boys and girls who,

on account of defective sight or total blindness, are unable to attend the public schools. Its stated objects are "to promote the physical well-being of the pupils and to strengthen their muscular systems, to develop and discipline their minds, to cultivate their hearts, and to chasten their sentiments, to improve their taste and æsthetic sense, and to provide them with as full an equipment as possible for the active duties of life."

Dr. Howe's dominant thought in establishing the school seemed to be to provide for the blind a permanently and definitely useful relation to society. He made it possible for their minds to be trained to clear thinking, and their hands to do honest labor, so that now they are able to stand forth in the world in their independence.

The school at South Boston provides for the training and education of advanced pupils, while the kindergarten at Jamaica Plain does its good work for the children.

Step by step, under the supervision of Mr. Anagnos, the curriculum of the school has been enlarged and improved. Manual training of late years has been especially emphasized, music in its various branches has been taught, and the work in the literary departments has made steady progress. New Hampshire is fortunate indeed in being privileged to send her blind children to this school for education, whose blessed privileges are now being enjoyed by fourteen children, while several more are anxiously awaiting their opportunity.

THE NEW HAMPSHIRE SOLDIERS' HOME.

This home was established by an act of the legislature, approved August 14, 1889, and was opened for the reception of inmates on December 3, 1890. It can accommodate one hundred and twenty-five old soldiers, but the average number of inmates is about eighty-three.

The state appropriates ten thousand dollars annually for its support, and the national government pays in addition one hundred dollars per annum for each soldier.

The home has a commanding location on an elevated site one mile from Tilton. No better place could have been chosen, so far as scenery and healthful conditions are concerned. The view from the verandas is one of great beauty, and the air throughout the year must be pure and bracing. But there is one great lack, and that is a good water supply. A one and one-half inch pipe is connected with the main pipe of the Tilton water-works, but, as the home is one hundred and twenty-five feet above the village of Tilton, there is no force to the supply, and only a sufficient quantity for domestic purposes is received. In case of fire, the amount of water with this low head would be entirely inadequate to afford protection.

The main building is a large structure, quite imposing in appearance. In the main part are the office, reception-room, reading-room and chapel, together with the rooms occupied by Commandant Smith and his family. From this main part extend two wings, and in these are the sleeping-rooms of the soldiers who are not classed as invalids. The laundry, recreation, and smoking-rooms are in the basement.

One of the rooms most used and enjoyed by the soldiers is the reading-room, where are found a large number of magazines, newspapers and books. Most of these are contributed by thoughtful and generous people outside the home. Every year one man sends a large box filled with literature of all kinds, and there is no gift he could bestow which would be received by these old men with greater thankfulness and pleasure than this contribution of reading matter.

The hospital is a wooden building, in the form of a cross with a central rotunda, situated forty feet in the rear of the main building. There are four halls. The rooms for hospital patients are on either side of these halls, and each is large enough for the accommodation of three or four, if necessary. There are eighteen of these rooms on the ground floor, and six on the floor above. In addition to these rooms the house has an ample kitchen and dining-room, a fine

cellar, toilet rooms, etc. It is heated by steam, lighted by electricity, and the sanitary conditions seem to be perfect. In this hospital thirty-five men, who are classed as invalids, have their home, and receive good care and proper nursing.

Commandant Smith, the superintendent, is regarded as faithful, efficient and successful. While there is discipline in the home, it is not of a kind which interferes with the freedom of the soldiers. They are permitted to come and go at their pleasure during the day and early evening. If they feel able, they help in doing some of the work around the place. Some assist the nurses in caring for the sick, and a few do enough work to receive slight compensation. But generally speaking, these men who have served their country in early life are allowed to decide for themselves whether they wish to do any work or not in this home provided for their declining years.

THE WOMAN'S AID HOME, MANCHESTER.

The Woman's Aid Home deserves special mention in this report, for it is the only "Home" we know of in the state where persons afflicted with chronic disease are received. It is the outgrowth of the Woman's Aid and Relief Society, organized in Manchester in January, 1875, during a time of great suffering and distress among the poor. At that time there was no hospital in the city, and the need of one was so strongly felt by the society in its work among the poor, that on January 12, 1878, a small hospital was opened, which was for several years the only hospital in Manchester. In 1882 it was enlarged, and in 1891 the large and beautiful buildings now occupied were bought by Aretas Blood and presented to the society. The patients were transferred in October, 1891, and the new institution then took the name of "Home" instead of hospital, and a veritable "home" it has proved to be to many an otherwise homeless invalid. The house is situated on the corner of Beech and Pearl streets, on high land, surrounded by spacious grounds, giving abundant light and air to the rooms.

It has accommodations for thirty-five or forty inmates, and is always full. The annual expenses average about \$7,500. The various churches and corporations contribute to its support, as well as many charitably disposed individuals, and upon the death of Mrs. Blood, last January, it received an endowment of one hundred thousand dollars, which will make it very nearly self-supporting. The city maintains one bed, to which the mayor is privileged to name the occupant. It is purely unsectarian, and is open to any resident of the state, though chiefly confined to Manchester people. Five nurses are constantly employed, besides the matron and necessary staff of servants. The rooms are bright, airy, and pleasant, and the aged inmates are many of them able to be up and about their rooms, though their days of active usefulness are past forever. Seven of the inmates are wholly blind, some are paralytic, some rheumatic, some are suffering from cancer, two are wasting away with old-fashioned consumption, and one poor man is ossified. To quote from a recent report:

"Some there are with no other infirmities than those usually attendant upon age, whose morning and midday of life were bright and sunny, surrounded by kindred and friends in happy homes, but who, through the vicissitudes of time and change, are left like the last leaf upon the tree, and in their enfeebled age here find the home comforts elsewhere lacking. Others there may be to whom life has ever been a wearisome struggle, filled with anxiety, who find here that rest and peace and comfort in their last years heretofore denied them.

"While the majority of those at the home are chronic invalids, or are here for a permanent home, the benefits are by no means limited to this class, and every year a considerable number are received who remain a few weeks for rest and recuperation from debility, or for treatment in acute diseases. Indeed, when our work began, it was this latter class it was intended to benefit; but the establishment of several other hospitals in the city since then has rendered this need less urgent.

“Those coming here who have the means are expected to pay a moderate price for benefits received, but those who have nothing are treated with equal consideration, and it is a most gratifying fact that no one can tell, from any distinctions made, who is a paying patient and who is not. Probably no one except the treasurer does know.”

That which impressed the visitor from the board of charities most strongly in going about from room to room, were the cheerful, happy faces of the inmates, even those who had been bedridden for years, or those who must be in constant pain. It was a truer testimony to the restful comfort of their lives in the home than anything else could have been. Truly there is no more noble or beautiful charity than this, to comfort the aged and sorrowful in their affliction, to “bind up the broken-hearted, to give unto them beauty for ashes, the oil of joy for mourning, and the garment of praise for the spirit of heaviness.”

MERCY HOME.

The Mercy Home was founded in 1891 by the W. C. T. U., for homeless wayward girls. Its work is preventive as well as reformatory in its nature, and has proved not only a protection for those who have been unfortunate but also a kind and restraining influence for those who have been left alone in the world with no one to care for and watch over them. It is located in Manchester on the Mammoth road, about three quarters of a mile from the East Manchester railway station, and can also be reached by the Valley-street line of the Manchester Electric railway. The house is large and comfortable and has accommodations for eighteen inmates. It is heated by steam and lighted by kerosene. The water is the city water supply, but for laundry purposes a large quantity can be obtained from a well upon the premises. This supply is not always reliable, however, and when it is necessary the city water is used. In connection with the house there is a large lot of land containing twelve acres, much of it

under cultivation. This year one hundred and twenty-five barrels of potatoes have been raised besides all the other vegetables needed by the home. A large orchard of fruit-bearing trees furnishes, every other year, apples sufficient not only for the home but also some for the market.

The reception-room, the girls' sitting-room, the matron's room, a large dining-room, kitchen and pantry are on the first floor; seven sleeping-rooms and a room that can be used for an infirmary are on the second floor; and on the third are eleven chambers. The absence of large dormitories is a pleasing feature. Each girl has her own room, and must care for it herself. Everywhere cleanliness and good order prevail.

A year ago a new laundry was erected back of the home, and is connected with it by a covered passageway. This building was much needed, as the old quarters in the basement had become too small for the work, and the large quantities of steam generated proved a serious menace to the underpinning of the building. This laundry is supplied with a boiler, two washers, a mangle, an extractor, a polisher, four set tubs, a laundry stove, etc. It is a large, airy, sunny room with windows on all sides, and is a comfortable place to work in. The "Mercy Home Laundry" has many patrons in Manchester, and is doing good work. The girls are employed here during the day, and are taught to do all kinds of laundry work by an experienced laundress. They are also taught to do sewing and housework.

A schoolroom has lately been finished in the upper part of the laundry, and is a simple, comfortable room with a seating capacity for eighteen. An evening school is kept up regularly through the fall and winter, which the girls attend four evenings in the week. They are interested in their school work, and during the year make much improvement.

Sundays they attend the Methodist church in East Manchester, and occasionally special religious services are conducted for them at the home by different ministers in the city and by evangelists who are kind enough to come.

The matron, who has been at the home for the past nine years, has at all times shown unselfish devotion, tact and executive ability, and has been a mother indeed to the girls.

There is no charitable work in the state more deserving of praise than the founding and providing of a home for wayward girls, and all credit and honor are due the New Hampshire Woman's Christian Temperance Union for establishing and maintaining the Mercy Home at Manchester.

The following is a list of the officers:

President, Miss C. R. Wendell, Dover.

Secretary, Miss Clara E. Rowell, Franklin.

Treasurer, Miss Isabella G. Mack, Manchester.

Matron, Miss Ella C. Hurd.

ROCKINGHAM COUNTY ALMSHOUSE.

The Rockingham County Almshouse is located at Brentwood, three miles from the Epping railway station of the Boston & Maine railroad.

The main structure is a large wooden building, four stories in height, above the basement, every floor of which is in constant use. The interior of the almshouse is divided into three parts, the central portion being occupied by the superintendent as a residence, the south end being used for the men, and the north for the women inmates. The kitchen is in the basement, and separates the dining-rooms used for the paupers. On the first floor of the north end are some of the sleeping-rooms, also rooms used for hospital purposes. On the other side of the corridor from the hospital rooms is a dining-room for the use of women who are not able to go to the general dining-room in the basement. At the end of this corridor are a bath-room and water-closets. The entire second floor and part of the third are given up to dormitory purposes. The other part of the third floor is used for the women prisoners. On the fourth floor of this end, a well lighted and well equipped operating room has been provided for

patients needing surgical attendance. At the time this institution was visited, there were four patients in the hospital rooms connected with this operating room, three of whom were suffering from amputation of the leg. There is an untrained attendant who devotes his entire time to the care of these patients. The chief criticism which can be made of this provision for the care of the sick is, that in case of fire, the patients on the fourth floor of such a large wooden building would be in great danger of their lives.

There is a two-story veranda upon the north end of the main building. This makes a very comfortable and pleasant place for the women inmates in suitable weather. The side occupied by the men is like the one occupied by the women, with the exception that the water-closets and bath provisions are not as good.

In the rear of the main building is a two-story brick building where fifty insane men and women are confined. This is the best building on the premises, but the plumbing should be improved, and many other repairs are needed. Directly in the rear of this brick building is a frame house which is also used for the insane, twelve of the worst cases being confined there. It is old and dilapidated with no plumbing whatever, and although great efforts are made to keep it clean, it is simply a place of shelter, and is in no way fit to receive the insane. The laundry and boiler-room are in another brick building. This boiler supplies heat for all the houses with the exception of the frame building used for the insane.

The house of correction is a brick building, located at the end of the men's side of the almshouse. There is provision for the care of thirty-six prisoners. As there is no apartment for women in this building, and there are often more than thirty-six men under sentence, all of the women prisoners and some of the men have to be cared for in the main almshouse, thus rendering a proper classification of the inmates impossible.

The water used by this institution is obtained from an artesian well. It is pumped into a large tank which is placed on

a wooden frame at an elevation of forty feet. This is situated in the rear of the almshouse and in close proximity to it. If a fire should occur in the main building the frame on which the tank rests would be in great danger of burning. The provisions against fire consist of a stand-pipe, with hose attached on each floor, and fifteen fire extinguishers distributed throughout the buildings. A watchman is on duty throughout the night, who registers every five minutes.

Since our last report several material improvements have been made at this almshouse. New steel ceilings and modern plumbing have been installed in the part used for the women. All of the buildings are now lighted by electricity. A new cottage has been built for patients suffering from contagious diseases. This building is in a grove a quarter of a mile from the almshouse. Two rooms in one of the buildings have been fitted up for patients suffering from tuberculosis. Yet with all these improvements there is still the most pressing need for an entirely new main building, as was pointed out in our last report.

Whenever this institution has been visited, it has been found remarkably clean, for which too much credit can hardly be given the superintendent and matron. When we consider that the main house has been in constant use for thirty years, with sanitary conditions very poor, compared with those of the other large almshouses in the state, we must realize that it is only by continuous labor and watchfulness that such neatness and cleanliness can be preserved. Norman H. Bean, and his mother, Margaret S. Bean, are the superintendent and matron. The physician is Dr. Mitchell, of Epping. Religious services are held twice each month by Rev. Mr. Bailey, of Brentwood.

Cost per capita per week, \$1.72.

STRAFFORD COUNTY ALMSHOUSE.

The Strafford County Almshouse is located in Dover, four miles from the railway station. In form it consists of a main building with a wing extending backward from each end.

It is built of brick, and is two stories in height. The superintendent resides in the central part of the main building. The north wing and the north end of the main building are occupied by the women, while the corresponding portion of the building upon the south is occupied by the men. The dining-rooms for both are on the first floors of their respective wards. Long corridors extend through these wards to the middle portion of the house, and the sleeping-rooms are on either side of these corridors on the two floors. In the basement of the central portion is the kitchen, where all the cooking is done.

The basement of the wing occupied by the men has been made into a house of correction. All the prisoners are kept here, and are entirely separate from the other inmates of the institution. Some of the time these prisoners work on the farm, and when they are thus occupied they are always under the charge of a keeper.

This county maintains its indigent insane at the state hospital, and the absence of this class cannot fail to impress one favorably, especially if he has been visiting the other county farms in the state.

This institution is heated by steam and lighted by electricity generated from its own plant. The arrangements for protection against fire are good. There are four hydrants outside, with a hose wagon and plenty of hose attached. Stand-pipes and hose are on every floor, and fire extinguishers and pails filled with water are hung at convenient places throughout the buildings. The superintendent has had fifty or more of these pails made according to an idea of his own. Steam is always kept up in case it should be needed to force the water. The men are trained in the use of the fire apparatus, and with all these precautions it hardly seems probable that this county will ever repeat its fearful experience of a few years ago.

Whenever this almshouse has been visited it has been found neat and the inmates well cared for. At the time of the last visit new floors had been put in throughout the insti-

tution, and new steel ceilings in the corridors. The commissioners and the superintendent and matron are certainly doing all they can to keep this almshouse in the best possible condition. Mr. and Mrs. E. A. Willand, the superintendent and matron, have been in charge since April, 1893. The physician is Dr. F. L. Keay, of Dover. Religious services are held every week by Rev. Mr. Wilson. A Catholic clergyman and sisters come twice a year, and also come in answer to calls from the sick.

Cost per capita per week, \$2.07.

BELKNAP COUNTY ALMSHOUSE.

The Belknap County Almshouse is situated in Laconia, one mile west of the Boston & Maine railway station. This institution consists of a main house, jail, and insane asylum. The main house was built thirty years ago and is constructed of wood. It is sixty feet in length, two stories in height, with a basement. Two wings extend to the north from this main building, the east one being for the men and the west for the women. The kitchen is in the south end of the basement of the main building, and here the food is prepared for all the inmates of the institution. Next to the kitchen is the room containing the boiler, which provides steam heat for all the buildings. On the floor above the basement are the superintendent's sitting-room, dining-room, reception-room and office. The dining-room for the women is on this same floor just back of the superintendent's rooms. The second floor is occupied by the superintendent's family for sleeping-rooms. On the first floor of the north wing is the dining-room for the men, also some of their sleeping-rooms, and one large smoking-room. A piazza extends the length of this wing, and as none of the men are able to work on the farm they spend a large share of their time in summer on this piazza. The second floor is used for a dormitory.

In the basement of the south wing is the laundry. On the two floors above are the sleeping-rooms for the women. As

there are about twice as many women as men in this almshouse with about the same amount of room allowed them, their quarters are filled to overflowing.

Many repairs are needed in the main building. The floors are badly worn, the plastering is falling, and the woodwork needs painting. There should also be rooms provided for the accommodation of those who are sick.

Within the last two years a new asylum for the insane has been constructed on the site occupied by the old one. It faces the main street and is to the left of the almshouse, being connected with it by a covered passage-way. It is substantially built of brick, forty-four by thirty-three feet, and is two stories in height. The basement is finished into one large room, and is used for the house of correction prisoners.

On the first floor is the ward for the insane men. It consists of eight rooms, with a bath-room and water-closet. The second floor, where the women are cared for, is identical with the first in plan and construction. Both wards have corridors eleven feet wide. The floors are of birch, and sheathing is used instead of plastering throughout the building. The ventilation is good, and the rooms and corridors are light and pleasant. There are twelve insane inmates, six men and six women. They are in the charge of a man and his wife during the day, but they are left alone at night. This building for the insane is very well constructed, and the commissioners have kept the cost of its erection within very reasonable bounds.

In case of fire the water for the protection of this institution is obtained from the Laconia water-works. The force is sufficient to reach the roof of any building on the premises. There are two hydrants, one directly back of the almshouse and the other in front of it, with five hundred feet of hose connected. There is a stand-pipe in the men's wing with hose attached on each floor. A tank filled with water for flushing purposes, is in the attic, and the water is pumped into it from the bay by a windmill. The main sewer extends forty rods from the almshouse, and the sewage is used upon the

land. The sewer from the sinks, extending in a northerly direction, is separate, and at times is very offensive. Something should be done to remedy this.

Mr. and Mrs. Weymouth are the superintendent and matron, and they have had the care of this institution for nearly five years.

Cost per capita per week, \$1.87.

CARROLL COUNTY ALMSHOUSE.

The Carroll County Almshouse is located in Ossipee about one mile from the railroad station. By reason of its elevation it commands a finer view than any other almshouse in the state. The building is of wood, three stories in height above the basement, and consists of a main part facing the highway, with a wing in the rear and an ell attached to the wing. The heating is by steam and the lighting by kerosene.

The basement of the main building contains the laundry, the kitchen, and a room for the storage of supplies. The first floor provides space for the office, superintendent's dining-room and sitting-room, and the dining-room for the inmates. On the second floor are the sleeping-rooms for the superintendent's family and the assistants employed about the premises. The attic of this part is used for a dormitory for some of the male inmates.

Corridors from this part of the building run directly through to the inmates' quarters in the wing and to that part used for the prisoners and for the insane, without any dividing doors. On either side of these corridors on the first and second floors, are the sleeping-rooms for the inmates, and for lack of suitable provision they are used by them for day rooms as well. At the end of the corridor on the first floor is the jail. This consists of four cells seven by nine feet, built of brick and stone with a concrete floor, and is by far the worst apology for a jail in the state. On the floor above and occupying the same space as the jail are the rooms where the insane paupers are

confined. This place is wholly unfit for them, and in case of fire in the wing of this building the insane and prisoners would have slight chance of escape.

By reason of the arrangement of the building it is absolutely impossible to classify the inmates—the men and women, the insane, the prisoners, and the aged poor are all together. This condition of affairs should not continue, and something should be done at once. If a new building cannot be erected, the present one should be enlarged, so that the inmates can be classified and sexes separated.

The water is pure spring water taken from a reservoir about half a mile from the building. The commissioners are about to enlarge this reservoir for the purpose of giving better protection in case of fire. There are two hydrants near the almshouse with three hundred feet of hose attached to each, stand-pipes in the building with one hundred and fifty feet of hose connected, and twelve fire extinguishers placed at suitable places throughout the building. All the men employed about the farm are instructed by the superintendent in the use of this apparatus. A night watchman makes his rounds once each hour and registers.

The plumbing is in good condition. The sewage is taken through an Akron pipe five hundred and fifty-seven feet from the building and is used upon the land.

This almshouse, notwithstanding the fact that it is one of the oldest in the state, with the most primitive arrangements, is always found spotlessly clean whenever visited, and reflects the greatest credit on the superintendent and matron, Mr. and Mrs. Meloon, who have been here since April 1, 1895. The physician is Dr. Ezekiel B. Andrews, of Ossipee. Religious services are held once a month by Rev. Alonzo Stillings, an Advent minister in Ossipee.

Cost per capita per week, \$1.48.

MERRIMACK COUNTY ALMSHOUSE.

On November 16, 1901, at 8 o'clock A. M., the Merrimack County Almshouse, at North Boscawen, was discovered to be on fire. This building was a three-story brick building erected in 1874, and was considered one of the safest and best almshouses in the state. When the fire was discovered it had gained such headway that all that could be done was to save the inmates, and within two hours the building had burned to the ground. If this fire had occurred in the night a loss of life must inevitably have followed. The commissioners at once arranged to take the insane paupers to the New Hampshire State Hospital at Concord, and decided to use the building formerly occupied by the insane, for the reception of the remaining paupers. This is a brick building, two stories in height with attic and basement. There are seventy-six sleeping-rooms and four bath-rooms. The wide corridors extending through the building were utilized for dining-rooms, and a kitchen was fitted up in the basement. Here, under the care of Mr. and Mrs. Eaton, the inmates have been quite comfortably cared for since the fire.

The county delegation, at a meeting held March 4, 1902, voted to instruct the county commissioners to select plans, and to erect a suitable almshouse to take the place of the one just burned. The commissioners carried out their instructions, and the new building is nearing completion. It is erected on the site of the old one, but is considerably larger. It is built of brick. The central part of the building is three stories in height. On either side of this central portion and connected with it, are two wings, two stories in height, extending seventy-six feet to the west. The south wing will be used for the women and the north for the men. The superintendent will occupy the main house as a residence and administration building. A basement ten feet in height extends under the whole house. In the basement of the central portion of the building will be the kitchen; in a portion of the basement of the south wing will be the chapel, with a seatin
g

capacity for fifty; and a portion of the basement of the north wing will be used for a smoking-room and the remainder will be fitted up as a house of correction where the prisoners can be kept entirely separate from the other inmates. It will have a separate entrance, and will contain a dining-room, a large dormitory, bath-room and water-closets. If the practice of committing prisoners to the county farm is to continue, this arrangement is a decided improvement over former conditions existing at this almshouse.

On the first floor of the section for the women a wide corridor extends in a southerly and then westerly direction to the exit on the south side of the building. The space on the front and south is devoted to sleeping-rooms, which are pleasantly arranged. The south-east corner room is intended for a maternity room. In the west end of this wing a room thirty-three by sixteen feet is fitted up for a hospital ward. It is light and airy, and has a bath and toilet room in connection with it. A piazza sixty feet long and ten feet wide on the south side of this wing will give the invalids an opportunity to enjoy the air and sunshine, and is one of the improvements which will give pleasure and comfort to a large number of inmates.

The second floor in this part of the building is similar in arrangement to the floor below. There is a dormitory over the hospital, and a sewing-room in the space over the dining-room. On the men's side there are ten sleeping-rooms, a dining-room and hospital room on the first floor, and on the second floor are ten small bedrooms and two large dormitories.

In the building there are in all one hundred and thirty-five rooms, eleven bath-rooms and twelve water-closets. The ventilation is excellent. Stand-pipes with hose attached are in the corridors, a radiator is placed in each room, and one hundred and seventy-three incandescent lamps furnish electric light. We believe that this almshouse, when finished, will be considered one of the best in New England.

Mr. and Mrs. Fred M. Eaton have been in charge since October 22, 1900.

Cost per capita per week, \$2.07.

HILLSBOROUGH COUNTY FARM.

The Hillsborough County Farm is situated at Grasmere in Goffstown, five miles from the Manchester city hall. The electric cars pass the almshouse, and the Grasmere station of the Boston & Maine railroad is but a short distance from it.

In 1893 the county convention voted to purchase this farm, to erect suitable buildings, and to remove the county charges from Wilton where they had been taken care of for many years. Under the authority of this vote, the buildings erected were the superintendent's residence, the almshouse, the asylum for the insane, and the house of correction, together with the necessary barns and outbuildings. They were finished and occupied during the summer of 1895.

The superintendent's residence is a modern and well equipped three-story brick building. Back of it is the almshouse. This is of brick, two stories in height, with a wing at either end of the main front. The wing on the right is used for the women, and the one on the left for men. The sexes are completely separated, and the sick and the infants are cared for in apartments especially fitted up for them. The kitchen and the large storerooms are in the basement; the dining-room, the sitting-room, nursery, and some of the sleeping-rooms are on the first floor, while the large dormitories are on the second floor. In all of the sleeping-rooms are iron bedsteads, and the bedding is clean and wholesome. The hospital wards and sewing-room are on the second floor also. The inmates who are not well, and usually there are quite a number of them, receive good care and attention in the hospital wards. If they are not able to go to the general dining-room, their meals are brought to them here. The sewing-room is well supplied with sewing-machines, and all the general sewing is done there. The nursery is light and airy, and is in charge of a competent woman. The children look neat, comfortable, and well cared for. Metal cribs have been provided within a short time, which are a

great improvement over the old arrangement. The cleanliness of this entire building is noticeable. The corridors and stairways are washed every morning with the exception of Sunday, and the floor of each room is washed twice a week.

The insane occupy a large brick building, two stories in height with a basement. There are two wings extending from the main part, one of which is occupied by the women and the other by the men. The arrangement of this building allows a better classification of the insane than is possible at some of the other county farms. There are four attendants for the women and two for the men. The rooms are comfortable, and wide corridors extend through the building, from which doors open upon piazzas where the patients can walk if they choose. A large yard in the rear is fenced, and this gives the women who are able an opportunity to be out in the open air. Then there is a grove a short distance away, and summer afternoons the attendants take many of the patients to this spot. There are about one hundred and sixty insane at this county farm, and the number is constantly increasing. This asylum, so recently built and at the time of its erection thought to be large enough to accommodate the insane for many years, is proving to be too small for the demands made upon its capacity, and if the present policy of caring for the insane by the counties is continued, it will be necessary to enlarge the present building or to erect a new one.

The house of correction is of brick, two stories in height. In the basement is the smoking-room, the water-closets and shower-baths. On the first floor are the office and the sleeping-rooms for the men in charge of the building. The remaining space on this floor is used for the prisoners. These men sleep in a large dormitory instead of being confined in single cells. The women's dormitory is on the second floor. The men prisoners wear convict suits, and when not at work under the direction of an overseer they are locked in the house of correction, and are not allowed to mingle with the other inmates of the almshouse.

A first-class laundry is in the rear of the almshouse, where the women prisoners work. The building is always locked, is under the care of a matron, and the inmates are never allowed to go about at will.

In one of the buildings belonging to the institution, which is at some distance from the others, rooms have been fitted up for the care of inmates suffering from contagious diseases.

The heat for the entire institution is furnished from a central boiler-house. Electricity is supplied by the Manchester Traction Company, and all parts of the buildings are lighted, there being three hundred lamps on the premises. The water is spring water, pumped into a reservoir situated on a height of land some distance from the almshouse. This reservoir has a capacity of two hundred and fifty thousand gallons, and a never failing supply is furnished. The water has a fall of one hundred and seventy-five feet, and this force is sufficient to throw hydrant streams to all parts of the buildings. There are seven hydrants about the premises, and stand-pipes with an ample supply of hose attached are in all the buildings, and the men employed about the institution are drilled in the use of the fire apparatus.

The sanitary conditions are excellent, and the cleanliness of the whole institution is commendable. The system employed in keeping the records and books might be advantageously adopted by all the almshouses in the state. The penmanship is neat and legible, and everything is kept up to date. The great need at this institution, as was pointed out in our last report, is trained care for the sick and the insane. One trained nurse at least should be employed in each of these departments.

The superintendent and his wife, Mr. and Mrs. Libbey, have been in charge nine years, and are deserving of great praise for their management. The administration is kind, careful, methodical, and businesslike.

Cost per capita per week, \$1.96.

CHESHIRE COUNTY FARM.

The Cheshire County Farm is located in Westmoreland on the Connecticut river, three miles from the depot, and thirteen miles from Keene. There are three hundred acres in the farm, ninety of which are under cultivation. The land is very fertile, and the farm stands third in value among the county farms of the state in regard to the productiveness of its soil and the amount of its yearly crops.

The main buildings consist of a three-story house and a two-story ell, both of which are built of brick. They were constructed in 1867, in a most substantial manner. Two large sitting-rooms, one for the men and the other for the women, are provided on the first floor. The sleeping-rooms on the floor above are large, well ventilated, and very comfortable. Iron bedsteads are in all the dormitories and the bedding is clean and wholesome. In the main building there is but one bath-room, which is used for the women. The bath-room for the men is in the basement of the building for the insane. The rule that "No smoking is allowed here" is strictly enforced in the main building, thereby freeing it from stale tobacco smoke, as well as lessening the danger from fire.

The inmates of this farm are mostly American, a large majority having been born and having lived in Cheshire county all their lives. As a class they seem intelligent, and but for sickness or unavoidable misfortune they would not now be dependent upon charity.

The building for the care of the insane women is one that deserves special mention. It is a brick structure entirely separate from the other buildings. On the first floor are twelve sleeping-rooms, a water-closet, and a bath-room. The sitting-room for the patients is on this floor, and is a large alcove off a wide corridor. The arrangement of space on the second floor is the same as on the floor below. On the third floor is a very attractive chapel where religious services are held fortnightly. It is also used for any entertainment that may be given for the pleasure of the inmates.

On account of the wide corridors and large amount of open space, this building seems particularly well suited for the care of the insane. It is light, airy and comfortable, without any offensive odors. Four ventilating shafts extending from the basement to the roof, render the ventilation perfect. The distribution of the radiators is such that in the winter the building is well and evenly heated. The cleanliness is absolute. The classification of the twenty patients is particularly good. Those who are not very excitable are on the first and second floors, while on the third floor those who are violent are provided with rooms especially fitted for the purpose. The matron has had previous experience in caring for the insane, and with her attendant gives most intelligent and painstaking care to these sufferers. Some light work is provided to interest those who are able to do it. If all the county insane were as well cared for as at Cheshire county the need for state care would not be so urgent. The location of the laundry in the basement of this building is not to be commended; still, with the perfect ventilation, there seems to be no serious objection to the arrangement. All the laundry work for the institution is done here.

This is the only county in the state which has provided separate buildings for insane men and women. The men are cared for in a two-story brick building in the rear of the main house. After visiting the asylum for the insane women, this building, with its narrow corridors, rather poorly lighted and ventilated, suffers by comparison. The same intelligent care, however, is given to the men as to the women, and they seemed very comfortable. In the basement is the general smoking-room for the men of the institution.

Cheshire county has always been one of the first to respond to any policy which seemed to be for the comfort and betterment of the dependent poor at her county farm, and since the first of January, 1902, she has sent nearly all of her prisoners convicted of minor offenses, to the jail at Keene, instead of the house of correction at the farm. The day the inspection was

made there were but two prisoners, consequently the house of correction was practically unoccupied, although it has accommodations for eight or ten.

The water used for domestic purposes is taken from a reservoir, which is supplied by springs. In case of an emergency, an inexhaustible amount can be procured from the river by the use of a steam-pump. Both the main almshouse and the building for insane women have stand-pipes, with hose attached on each floor. There are three hydrants at convenient places about the premises, and the head from the reservoir is sufficient to throw a stream over the top of any building. There are at least three hundred feet of standard hose, but this amount should be doubled in order to furnish effective service.

This board in its last biennial report, while commending the general conditions of the Cheshire county farm, called the attention of the county commissioners to needed improvements for the better protection of life and property against the dangers from fire, and recommended the appointment of a night watchman; also the use of electricity instead of kerosene for lighting purposes. At a meeting of the county delegation, held August 29, 1901, this matter came up for consideration, and the commissioners were instructed to employ a night watchman and to investigate the cost of an electric light plant. After a most thorough and comprehensive investigation of the matter, the commissioners reported to the county delegation the result of their work, and they were empowered to erect a suitable building for the purpose, and to procure all the necessary equipment for electric lighting. The building has been constructed and a new boiler has been furnished, together with a generator, dynamo, and storage battery. The necessary wiring has been done, and there are two hundred and twenty incandescent lamps, conveniently placed throughout all the buildings. This is a model electric light plant, and if any institution is considering the advisability of installing one, we should advise a visit to the Cheshire county farm for an inspection of this plant.

It is not necessary to repeat the commendation of our former report concerning the general management of this institution. The same high standard is still maintained, and the superintendent and matron, Mr. and Mrs. Asa Whitman, who have been here in all eleven years, stand in the front ranks of their profession.

Religious services are conducted by Rev. G. H. French, the Congregational minister from Westmoreland, and by Rev. Mr. Quimby, the Universalist minister from the same town.

Cost per capita per week, \$2.20.

SULLIVAN COUNTY ALMSHOUSE.

The Sullivan County Almshouse is situated in Unity. The nearest railway station is at Claremont, and is five miles distant. The farm contains four hundred acres, and consists of timber, pasture, and tillage land.

The superintendent and his family occupy a small story and a half cottage connected with the east end of the almshouse. The almshouse is a four-story wooden building, built in 1869, heated by steam, and lighted by kerosene. Wood is used for fuel. The dining-room and kitchen are in the end of the building on the first floor. The inmates, both men and women, have their meals in the same dining-room. The sleeping apartments for the women are in the east half of the building, on the second and third floors. The sleeping-rooms for the men are in the west half, on the second, third, and fourth floors. There are no hospital rooms provided.

The insane are confined in a two-story wooden building, thirty feet west of the main house. The men occupy the first floor and the women the second floor. There are fifteen patients, six men and nine women. A man attendant has charge of this building, and the matron supervises the care of the women. At eight o'clock at night all lights are extinguished, the doors are locked, and the insane are left alone with no attendant.

There is no sewerage system in connection with this institution. Extra care is taken, however, to keep everything as clean and healthful as possible. The water supply is furnished from a reservoir fed by springs three-fourths of a mile distant. This is enough for domestic purposes, but in case of fire there would not be force or quantity sufficient for effective work. As there is but one stairway for the paupers occupying the rooms on the third and fourth floors, and as their doors are locked, there should be fire escapes from each story above the second. A night watchman is employed six months of the year.

All the buildings have been painted outside, and have been much improved in their external appearance, but they need many improvements inside. Modern plumbing should be installed throughout them all, the protection against fire should be increased, and a night watchman should be employed the entire year.

Since the last biennial report there has been a change in superintendents. Mr. Willard, having served the county in the most efficient manner for ten years, resigned, and Mr. W. S. Perry was appointed to take his place. He assumed his duties April 1, 1901.

Dr. A. L. Marden, of Claremont, is the physician. Religious services, conducted by Rev. Guy Roberts, of Charlestown, are held once in two weeks.

Cost per capita per week, \$1.58.

GRAFTON COUNTY FARM.

This institution is located in Haverhill, two miles and a half south of Woodsville, on the White Mountains division of the Boston & Maine railroad, with a flag station close to the almshouse. The farm consists of about four hundred and fifty acres. The land is of most excellent quality, one hundred and fifty acres being devoted to mowing and tillage. The yearly crops are large, hay being the chief product. Three hundred tons or more are raised annually, and a new hay

barn has recently been erected on the "island," so called. The labor on the farm is performed mostly by the inmates under the direction of the officials.

The buildings consist of a main house with two wings, one extending to the east and the other to the west. The building for the insane is to the west of the last mentioned wing, and is connected with it by a covered passageway.

The main building is occupied as a residence by the superintendent, his family, and the assistants employed. The first floor contains the sitting-room, office, family dining-room, and kitchen. The upper floors are used for sleeping-rooms. The east wing is used for the women. The dining-room is on the first floor, and the remainder of this floor provides day rooms for them. Part of the second floor of this wing is used for hospital purposes, and the remainder, together with the third floor, for the sleeping apartments. The west wing is used for the men, and is similar in construction to the east, with the exception that a large room is set aside on the first floor for a smoking-room.

The building for the insane consists of three floors, the first being used for the men and the two upper for the women.

The laundry is located in the rear in a brick building which also contains the boilers for heating the institution. Within the last two years modern tubs, wringing-machines, and washing-machines have been installed in the laundry, and a room over the laundry has been fitted up with steam pipes for drying clothes.

The water is taken from a reservoir with a capacity of fifty thousand gallons. The supply is ample, and as the reservoir is situated on a hill seventy-five feet above the level of the land on which the buildings stand, the pressure is sufficient for supply and for use in case of fire. Hydrants are located about the premises with a sufficient amount of hose, thus making the protection remarkably good, and as this farm is only two miles and a half from Woodsville the fire department of that place could respond very quickly to a summons for help. In this respect this almshouse has a great advantage over any other in the state.

On the day of the last visit to this institution the buildings were found in excellent condition, the commissioners having renovated them inside by painting, whitening and papering. The sanitary conditions seemed to be excellent, many needed improvements having been made in the plumbing.

The superintendent and matron, Mr. and Mrs. H. C. Phillips, are efficient and capable as well as kind-hearted, and the inmates seem to appreciate the humane treatment which they receive.

Religious services are held fortnightly by Rev. C. E. Eaton.

Cost per capita per week, \$1.30.

COOS COUNTY FARM.

The Coös County Farm is situated on the Connecticut river at West Stewartstown, a short distance from the Maine Central railway station. The farm consists of five hundred and seventy-five acres, one hundred of which are tillage and mowing land. The crops raised here are larger, with the exception of Grafton county, than those raised at any other county farm in the state.

The superintendent's residence, the main almshouse, and the building for the insane are connected and form a long row of wooden buildings. The superintendent's home is a very comfortable dwelling-house, two stories in height. The main almshouse is four stories in height, and the east half is occupied by the women and the west by the men. One of the noticeable features of this building is that there is no plastering. The walls and ceilings are sheathed, and being kept well varnished, offer a very cleanly appearance. The superintendent thinks that wholesomeness and cleanliness are much better preserved by the use of sheathing, if it is well cared for, than by plastering. The building for the insane contains twelve rooms, is two stories in height, and has a bath-room on each floor. The women live upstairs and the men downstairs. Wide corridors extend through the center

of the building, and here those patients who are able, exercise and pass most of their time. On the day the institution was visited there were sixteen inmates, nine men and seven women, with no very troublesome ones among them. They are cared for by a woman who is subject herself to periodical attacks of insanity, and by the superintendent and matron.

The house of correction, one story in height, was built in 1901. It is a wooden building, entirely separate from the others. There are eight steel cells with two bunks in each. In one corner is a bath-room and in every cell is a water-closet. Only the men prisoners are kept here, the women being cared for in the main almshouse. There were eight men and three women prisoners at the time the institution was inspected. The superintendent said that the average number of men to be found here at any time was usually about eight. These prisoners wear a uniform and work upon the farm under the care of an overseer. Their meals are served in this building, and if they are not employed, they are locked up. Nearly all the labor upon the farm, including the cutting of the wood for fuel, is done by the prisoners.

The boiler-room and laundry are in a building in the rear of the main almshouse. All the fuel used is cut from a wood-lot belonging to the farm. In this particular this county is saved a large bill of expense.

Throughout the almshouse the plumbing has been improved during the past year, and six modern water-closets and two bath-tubs have been provided.

As all of these wooden buildings are in close proximity to each other, several of them being connected, and as they are very near the railroad, thereby exposing them to the danger of passing engines, the greatest precautions should be taken against fire, the ever threatening menace to life and property. For protection there are two hydrants, and the force of the water from the reservoir is sufficient to throw it to the top of any of the buildings; then there are stand-pipes in the main building and the building for the insane, with hose attached on each floor. All of this fire apparatus is under the charge of one

man, and every person employed on the farm is instructed in its use. Fire escapes are provided on the east and west ends of the almshouse from the fourth floor to the ground. A night watchman makes his rounds every hour and registers. As a still further protection, fire extinguishers should be distributed throughout the buildings.

Mr. and Mrs. Ed. Fuller are the superintendent and matron, and their gentle and firm management make for contentment and good order among the inmates, many of whom are natives of the county and have lived at the farm for a long time. This institution is an exceedingly comfortable, home-like and well-managed place.

Religious services are held twice a month by Rev. Charles W. Kelley.

Cost per capita per week, \$1.36.

TOWN AND CITY FARMS.

Since 1860, there has been a gradual change from the early "town" system, so called, whereby each town and city maintained its own poor within its own limits, to the county system authorized by the legislature of that year—each one of the counties being authorized by the law to establish a county poor farm, where town and county paupers might both be maintained, the towns paying the counties for their own poor, i. e., those that had a "settlement" in the town. The laws regarding "settlements" have been changed from time to time, until finally, in 1897, they became such that there are practically almost no more town paupers, nearly all becoming legally dependent upon the county for support.

So far as we can ascertain, only three of the old "town farms" now exist, at Weare, Salem and Hanover, and in only one, Weare, are any paupers still maintained, three being reported there in January, 1902; while three cities, Manchester, Nashua and Portsmouth, still maintain their city farms. But Manchester and Nashua use them chiefly as houses of correction for the reception of prisoners, Portsmouth alone maintaining hers as an almshouse. In fact, it is

only in Portsmouth and Weare that the last vestige of the old town system of caring for the poor exists, and both these places are considering the question of final discontinuance.

A description of the three city farms follows:

MANCHESTER CITY FARM.

The Manchester City Farm is an institution capable of caring for seventy-five inmates, and is situated on the Mammoth road in East Manchester. They often have fifty there, but at the time of the last visit there were but fourteen, all prisoners, thirteen men and one woman. There is one large wooden building. In the main part of this are the office, reception-room, and the rooms used by the superintendent, his family and assistants. A long wing has been added to the original building. In this are the dining-rooms and dormitories for the men, with a separate dining-room and apartments for women.

The fire protection is first-class. They have hydrant service connected with the Manchester water-works, fire extinguishers and pails filled with water at convenient places. The responsibility for keeping this apparatus in good condition and in readiness to be used is placed upon the night watchman.

Mr. and Mrs. Eugene Libbey, the superintendent and matron, have been there for ten years, and have given good satisfaction. There are no children at the farm.

NASHUA CITY FARM.

The Nashua City Farm is located two miles from the city hall. Mr. J. H. Wheeler and his wife have had charge of this farm for four years. There were fifteen inmates the day of the last visit. Eight of them were prisoners and seven were paupers. Forty persons can be cared for, but for the last four years twenty has been the average number accommodated here.

The building is a large wooden structure, which contains the superintendent's apartments, and from this building extends a wing which is used for the inmates.

The sanitary conditions are first-class. The water supply is from the city water-works of Nashua. The provision against fire is good, there being two hydrants, with hose and stand-pipes in the house. The lighting is by kerosene. In the winter a night watchman is provided.

The men committed as prisoners occupy a dormitory on the third floor. The windows are heavily grated, and it was suggested that the prisoners' chances for escape in case of fire would be small. The superintendent explained that their removal was provided for through his own apartments.

There were two boys living at this farm. They had been there for two years. When they entered they were a little over thirteen years old, and should have come under the supervision of the State Board of Charities, but the management did not know of the law until their attention was called to it at the time of the visit.

PORTSMOUTH CITY FARM.

The Portsmouth City Farm is located on Myrtle avenue, one mile from the Boston & Maine railroad station. The main building is composed of brick, and was built in 1834. It is quite a large structure, being capable of sheltering one hundred persons. It is lacking in many of the modern improvements, yet it is a better building with reference to safety in case of fire than some of the county almshouses.

Mr. and Mrs. John W. Shannon are the superintendent and matron.

January 9, 1902, the date of the last visit, there were ten inmates, one man and nine women. There were no prisoners.

ROCKINGHAM COUNTY JAIL AT PORTSMOUTH.

The Rockingham County Jail at Portsmouth, which is a substantial brick building, is situated on Penhallow street, and was erected in 1891. The front part is used by the jailer as his home. The jail apartments are in the rear, and are entered by a door from the jailer's office. The cells are solidly constructed of steel, and are placed back to back in two tiers, each tier being divided by a narrow passage which runs the length of the block. There are twenty-four cells in all, with a wide corridor extending around them, and the whole is enclosed within a large steel cage. The prisoners are given the freedom of the walk between the cells during the day, but they are not allowed in the wide corridor. Each cell is ventilated by pipes extending to the roof, and light and air are received from large windows in the outer walls. The building is heated throughout by steam, and is connected with the water and sewer system of the city. The plumbing is first-class, and the sanitary conditions seem good. Each cell contains two beds, furnished with husk mattresses, sheets, blankets, pillows and pillow-cases. This is the only jail in the state which supplies both sheets and pillow-cases for the beds. Whenever the jail has been visited everything has been found unusually clean and comfortable. The turnkey, with the assistance of some of the prisoners, does all the work.

The apartment for the women prisoners is on the second floor above the kitchen, and is supplied with the proper sanitary conveniences. There are two cells with two beds in each.

Religious services are held every Sunday by the Young Men's Christian Association, and this association also furnishes reading matter.

Sheriff M. M. Collis acts as jailer.

ROCKINGHAM COUNTY JAIL AT EXETER.

This jail is situated on Forest street, in Exeter, and is connected with the residence of the jailer. It is built of brick, and has eight large cells, four on each floor. One bathtub is furnished for the use of the prisoners, and in each cell there is a water-closet. The building is heated by steam, and is connected with the water and sewer systems of the city. No provision is made for women convicts.

On the day the institution was visited there were eight prisoners. As the corridors are not considered secure, these men are confined in their cells night and day. This constant occupation of the cells makes the air seem heavy and vitiated.

Religious services under the direction of the ministers of Exeter, who take turns in conducting them, are held every Sunday. Every fifth Sunday the Woman's Christian Temperance Union take charge of the meetings.

Deputy Sheriff Robert Scott is the jailer.

STRAFFORD COUNTY JAIL.

The Strafford County Jail is located in Dover on a height of land overlooking the city. The building is of brick, and was erected in 1888. It is heated by steam, is lighted by electricity, and is furnished with city water. The sewage is conveyed one hundred feet from the building, and from there finds its way fifty feet further to a lower point where it stands in a pool. This system of sewerage, which could be remedied at a small expense, should not be allowed to continue.

The jail is a rotary jail, and it is claimed that there is but one other of the kind in the country. The rotary part contains twenty cells where the male prisoners are confined, and it can be revolved by two men. Owing to this peculiar construction, hammocks are furnished instead of bedsteads. Cotton blankets are used for bedding. No sheets or pillow-cases are provided. The cells are dark and poorly ventilated. Each one has a water-closet, and there are two bath-tubs

in the corridors, one on each floor. The plumbing is in fair condition. There is no woodwork within the brick walls of the jail, and the whole interior, which is composed of steel and iron, sadly needs painting and whitening. In the basement are two steel cells where vicious prisoners may be kept in solitary confinement. The women prisoners are kept in an apartment containing four cells on the second floor in the ell of the jailer's residence. Their quarters are provided with a water-closet but no bath-tub. On the first floor of the ell is the guard-room, and in the basement the laundry.

No room which can be used for hospital purposes is available, and there seems to be a general need for larger and more convenient accommodations.

There is no workshop attached to the jail, and the men are not employed in any way. The average number confined here is twenty-seven. No religious services are held.

Sheriff George W. Parker is the jailer.

BELKNAP COUNTY JAIL.

The Belknap County Jail is located to the southeast of the almshouse, and is connected with it by a corridor. It is a brick building thirty-eight by fifty feet, with a slate roof. There are eighteen cells in all, sixteen for the men within the jail proper, and two for the women, opening from the corridor outside. In each cell there is a water-closet, and one bath-tub is provided for the use of the prisoners. The women's quarters are entirely separate from the men's.

Mr. H. C. Weymouth, superintendent of the county farm, is the jailer.

CARROLL COUNTY JAIL.

The Carroll County Jail is a part of the Carroll County Almshouse, and a description of it will be found included in the description of the Carroll County Almshouse.

MERRIMACK COUNTY JAIL.

The Merrimack County Jail is situated on Warren street, at the west end of the city of Concord, about a mile from the railway station. It is a brick building originally containing twelve cells, but recently enlarged by an addition containing twelve more cells. There are separate rooms for women prisoners in the jailer's department, outside the jail proper.

This is the only jail in the state where members of the State Board of Charities are not admitted at once when they call. We have never visited this jail without having to wait some time before being admitted, and one member of the board has been refused admittance several times. When finally admitted, in July, 1902, the jail was found in a very bad condition, very dirty, badly ventilated, and swarming with flies. No sheets or pillow-cases are furnished here, and the beds looked very dirty. Open uncovered water-closets are in each cell, and there is only one black iron bath-tub in the corridor for the use of all the prisoners. The prisoners are supposed to take the entire care of the jail under the supervision of the turnkey, who does no cleaning himself. There were twenty-four prisoners at the time of this visit, all men, including one young man of twenty years, who was helping in the kitchen. Several "trusties" were working outside without any guardianship, including one prisoner who was in for criminal assault upon a woman.

Every Sunday afternoon the Christian Scientists hold services at the jail from two to three o'clock. No other Christian minister in this town has set foot in this jail since Mr. Clough became jailer. The prisoners have reading matter given out to them every Sunday. Everything outside the jail proper seemed neat, clean, and wholesome, and the food is good and sufficient.

Sheriff M. Swain Clough has been the jailer since April, 1901.

HILLSBOROUGH COUNTY JAIL.

This jail is situated in a large lot of land at the corner of Willow and Valley streets in Manchester, and may be easily reached by the Valley-street line of electric cars. It stands on elevated ground, and receives light and air from all sides. It consists of a wooden dwelling-house in which the jailer has his office and private apartments, and a brick jail building adjoining it in the rear. The whole institution is heated by steam, lighted by gas and electricity, and supplied with city water. Throughout the building are hand fire extinguishers, and besides these the jail has a fire alarm connected with the city fire department.

On the day the jail was last visited there were fifty-one prisoners, forty-five men and six women. Among these prisoners there are very few young boys, only those who are bound over to appear at court are confined here. They work with the older men in the shops, but sleep in a tier of cells by themselves.

The food is good and wholesome, and owing to the general cleanliness and the good care taken of the prisoners there has been practically no sickness in the jail during the past twenty-five years.

The kitchen, leading from the jailer's private dining-room, and containing one large range, one smaller cooking-stove, one gas range, and a brick oven where the beans, etc., are baked, is a large room forty by fifty feet, and here all the cooking for the institution is done. From this room opens a corridor leading to the women's quarters, which consist of five cells with one bed in each cell. In front of the cells is an open space where they are allowed to stay during the daytime when they are not employed about their work. Under the direction and care of the matron they do all the prisoners' washing and mending, and some of the general sweeping.

A block of thirty-five cells where the men prisoners are confined, are arranged in four tiers. They are constructed of brick on the usual plan, back to back. There are five cells

in each tier on either side and a wide corridor surrounds the block. Light and air are received from large windows in the outer walls of the building, and each cell is also ventilated independently by pipes extending to the roof. All the cells are furnished with single iron bedsteads provided with ticks filled with straw, pillows, blankets, and two sheets. The sheets are changed every week, and the ticks and blankets are washed two or three times a year or oftener, and the ticks refilled with clean straw. The sanitary buckets provided for each cell are placed in a convenient receptacle having thorough ventilation to the roof. The greatest cleanliness is everywhere observed. Every month sulphur is burned in all the cells, and this keeps them in a wholesome condition. All the corridors are washed twice a day during the week and once on Sunday. In the men's quarters there are three bath-tubs for their use. Saturday afternoon the prisoners do not work, and they are required to bathe and a change of clean garments is furnished them. They do not wear a uniform but the same clothing they have at the time of arrival, and if any are in actual need, they are supplied with suitable wearing apparel.

This jail is not only the cleanest and best ventilated jail in the state, but is also the only jail in the state where any occupation is given the prisoners. The industry carried on is the manufacture of brooms. The workshop is a large, airy room opening directly from the room where the cells are, with good light from windows on two sides, and the blessing the work is to the prisoners can hardly be estimated. The contrast is very great between this jail and the other jails in the state, where the men are always found lounging about, smoking, playing cards or reading doubtful literature.

Religious services are held occasionally by the Young Men's Christian Association, or Woman's Christian Temperance Union.

Capt. David Wadsworth has been the jailer since 1876.

CHESHIRE COUNTY JAIL.

The Cheshire County Jail is situated in Keene on one of the most desirable lots in the city. It is a substantial brick building, and was erected in 1884 at a cost of \$31,000. In the front of the main building is the sheriff's dwelling-house, and extending back from this is a wing in which there are eighteen cells where the men prisoners are confined. The place for the detention of the women is entirely separate.

At one time a workshop was fitted up in the main part of the building, and the prisoners were employed, but this arrangement did not prove sufficiently remunerative to warrant its continuance, for the number at any one time was small, and they did not remain long enough to really accomplish satisfactory work.

The sanitary arrangements are all that could be expected, everything is clean, and the general condition of the jail is that of a thoroughly well-kept institution. Reading matter is furnished the prisoners from a library in the office. Religious services are held every Sunday.

Sheriff William S. Tuttle is the jailer.

SULLIVAN COUNTY JAIL.

The Sullivan County Jail is situated in Newport, a few rods from the railway station. It is a brick building with a slate roof, and the jailer occupies a large part of it as a residence. The jail proper consists of two tiers of cells built of stone with iron doors. There are three cells in each tier, with two bunks in each cell. A corridor extends in front of the cells, which is ventilated by windows and lighted by one incandescent electric light. One large stove, which furnishes the heat for the jail, is in this corridor, and wood is used for fuel. The prisoners take care of the cells and corridors, and the cleanliness at the time of the visit was not all that could be desired. The water-closets in the cells were badly out of repair, and the sanitary conditions did not seem particularly good. A room for the women prisoners is provided in another part of the building.

As this is the only place of detention for prisoners convicted of minor offenses and for those awaiting trial, or for persons held as witnesses, the county should provide a more commodious and better equipped jail.

Mr. Warren Howe is the jailer.

GRAFTON COUNTY JAIL.

The Grafton County Jail is located at the county farm in Woodsville. The superintendent of the farm is the jailer. The building is made of brick and contains seventeen steel cells, around which is a steel corridor where the prisoners can exercise when they are not locked in their cells. On the first floor a bath-room is provided, and there is a water-closet in each cell. Separate apartments are furnished for the women. No reading matter is provided.

This jail in its general condition and management compares favorably with any in the state. The building is heated by steam, lighted by electricity, and has a plentiful supply of water.

COOS COUNTY JAIL.

The Coos County Jail is located in Lancaster, and was erected in 1891. It is a wooden structure with the jailer's residence in the front and the jail in the rear. In the jail is a steel cage enclosing twelve cells.

Everything is kept spotlessly clean, and new floors and fresh paint have much improved the place since our last report. At the time of the last visit made — September, 1902 — there were only five prisoners, all men, and that is about the usual number. The same defects in construction exist as have been mentioned before, and there is no provision made for women prisoners. Pillow-slips are furnished the prisoners, but no sheets. They do their own washing, and take care of the jail. They have plenty of reading matter furnished by the churches and Woman's Christian Temperance Union. No religious services are held, and no minister ever visits the place. No regular work is given the prisoners.

Mr. John Flanders is the jailer.

LIST OF VOLUNTEER VISITORS.

Belknap County.

Mrs. J. G. Bard	Meredith.
Mrs. Lilian Hanson	Center Harbor.
Mrs. Mary W. Merrill	Belmont.
Rev. E. H. Wright	{ Gilmanton.
	{ Sanbornton.

Carroll County.

Rev. Charles Coleman	Wakefield.
Mrs. S. A. Cook	Union.
Mrs. L. D. Keay	Effingham.
Mrs. S. E. Morse	Moultonborough.

Cheshire County.

Mrs. Lydia M. Holton	Hinsdale.
Mrs. Eugenie C. Madden	{ Keene.
	{ Roxbury.

Coos County.

Mrs. J. W. Baldwin	Pittsburg.
Mrs. Hiram Blanchard	Stewartstown.
Mrs. N. M. Davenport	Jefferson.
Mrs. Clara E. Howe	Lancaster.
Miss Cora Locke	Columbia.
Mrs. Charles S. Raymond	Colebrook.
Mrs. John Sheridan	Berlin.

Grafton County.

Mrs. Channing Bishop	Bristol.
Mrs. James Brown	Wentworth.
Miss Ina Cutting	Orford.
Miss Ida A. Cox	Enfield.
Miss Myrtie P. Conant	Bath.
Miss Katherine Morse	Haverhill.

Hillsborough County.

Mrs. Charles H. Burns	.	.	.	Wilton.
Mrs. Victorene McDonald	.	.	.	Manchester.
Mrs. Frank Preston	.	.	.	Manchester.
Mrs. Lucia Meade Priest	.	.	.	Manchester.
Mrs. Roger Sullivan	.	.	.	Manchester.
Mrs. R. H. Dillon	.	.	.	Manchester.
Mrs. C. E. Dodge	.	.	.	Manchester.
Miss Elsie Fairbanks	.	.	.	Manchester.
Miss Josephine Flanders	.	.	.	Weare.
Miss Helen Jones	.	.	.	Hillsborough.
Mrs. J. H. McAlpine	.	.	.	New Boston.
Mrs. D. F. Runnells	.	.	.	Nashua.
Mrs. J. B. Smith	.	.	.	Hillsborough.

Merrimack County.

Mrs. I. N. Blodgett	.	.	.	Franklin.
Miss Sallie Carpenter	.	.	.	Chichester.
Mrs. Clarence E. Carr	.	.	.	{ Andover.
				{ Potter Place.
Mrs. J. H. Dearborn	.	.	.	{ Hooksett.
				{ Suncook.
Mrs. Benjamin Emons	.	.	.	Wilmot Flat.
Miss Abba Fiske	.	.	.	Concord.
Miss Mary A. Gurley	.	.	.	Concord.
Mrs. Helen Felch	.	.	.	Bradford.
Mrs. Walter Gray	.	.	.	Bow.
Miss Elizabeth F. Houser	.	.	.	Canterbury.
Mrs. Cora Huntington	.	.	.	Henniker.
Mrs. W. H. Mitchell	.	.	.	Loudon.
Dr. J. D. Quackenbos	.	.	.	New London.
Mrs. D. A. Sargent	.	.	.	Northfield.
Mrs. J. B. Tennant	.	.	.	{ Short Falls.
				{ Epsom.
Mrs. H. A. Tuttle	.	.	.	Pittsfield.

Rockingham County.

Mrs. C. R. Brown	.	.	.	.	Deerfield.
Mrs. Mary C. Fitts	.	.	.	.	Newfields.
Mrs. Ella L. Follansby	.	.	.	{	Exeter.
				{	Atkinson.
Miss Susan H. Mathes	.	.	.	.	Portsmouth.
Rev. W. A. Rand	.	.	.	.	Seabrook.
Mrs. J. L. Seavey	.	.	.	.	Greenland.

Strafford County.

Mrs. Dennis Cash	.	.	.	.	Dover.
Miss Elizabeth Sawyer	.	.	.	.	Dover.
Miss Mary P. Woodman	.	.	.	.	Dover.
Miss Edith Legros	.	.	.	.	Somersworth.
Mrs. C. H. Pettee	.	.	.	.	Durham.
Miss Annie Wallace	.	.	.	.	Rochester.
Mrs. J. H. Waterhouse	.	.	.	.	Barrington.

Sullivan County.

Rev. Elmer T. Blake	.	.	.	.	Charlestown.
Miss Esther Chatterton	.	.	.	.	Acworth.
Miss Addie C. Currier	.	.	.	.	East Lempster.
Mrs. Herman Holt	.	.	.	.	Claremont.
Mrs. Charles Kimball	.	.	.	.	Unity.
Mrs. Lucy M. Lewin	.	.	.	.	Plainfield.
Mrs. Josiah Hooper	.	.	.	.	Goshen.
Mrs. Seth Richards	.	.	.	.	Newport.
Mrs. Irving Rowell	.	.	.	.	Sunapee.
Mrs. Silas Tucker	.	.	.	.	Cornish.

LIST OF HOMES, HOSPITALS, AND CHARITABLE
ASSOCIATIONS IN NEW HAMPSHIRE.

New Hampshire Soldiers' Home . . .	Tilton.
New Hampshire School for Feeble-minded Children	Laconia.
New Hampshire Odd Fellows' Home . .	Concord.

Homes for the Aged.

Gafney Home for Aged	Rochester.
Home for Aged Women	Portsmouth.
New Hampshire Centennial Home for the Aged	Concord.
Notre Dame de Lourdes (Catholic) . .	Manchester.
Old Ladies' Home (Catholic) . . .	Manchester.
The Gale Home for Aged Women . .	Manchester.
The John M. Hunt Home for Aged Couples	Nashua.
The Protestant Home for Aged Women	Nashua.
Wentworth Home for the Aged . . .	Dover.

Homes for the Young.

New Hampshire Orphans' Home . . .	Franklin.
Manchester Children's Home	Manchester.
St. Patrick's Orphanage for Girls (Catholic)	Manchester.
St. Joseph's Boys' Home (Catholic) . .	Manchester.
Hospice St. Vincent de Paul (Catholic)	Manchester.
Orphanage of Notre Dame de Lourdes (Catholic)	Manchester.
St. Peter's Orphanage for Boys (Catholic)	Manchester.
Our Lady of Perpetual Help Infant Asylum (Catholic)	Manchester.
St. Mary's Home for Girls (Catholic) .	Dover.
Dover Children's Home	Dover.

Nashua Day Nursery and Children's	
Home	Nashua.
St. Joseph's Orphanage	Nashua.
Chase Home	Portsmouth.
Orphans' Home	Concord.
Rolfe and Rumford Asylum for Girls . .	Concord.

Other Homes.

Invalids' Home	Keene.
Woman's Aid Home	Manchester.
Mercy Home (W. C. T. U.)	Manchester.
Home for Working Girls (Catholic) . .	Manchester.
Night Refuge for Homeless Girls and	
Women (Catholic)	Manchester.

Hospitals.

Berlin Hospital	Berlin.
Cottage Hospital	Claremont.
Elliott City Hospital	Keene.
Elliot Hospital	Manchester.
Sacred Heart Hospital (Catholic) . .	Manchester.
Hospital of Notre Dame de Lourdes	
(Catholic)	West Manchester.
Emily Balch Hospital	Plymouth.
Exeter Cottage Hospital	Exeter.
Hayes Hospital	Dover.
Highland Springs Sanatorium	Nashua.
Nashua Emergency Hospital	Nashua.
Laconia Cottage Hospital	Laconia.
Mary Hitchcock Memorial Hospital . .	Hanover.
Margaret Pillsbury General Hospital .	Concord.
Woman's Memorial Hospital	Concord.
Portsmouth Cottage Hospital	Portsmouth.

CHARITABLE ASSOCIATIONS.

New Hampshire Prisoners' Aid Association.

President, Allen Folger	. . .	Concord.
First Vice-President, John C. Thorne	. . .	Concord.
Secretary, Rev. N. F. Carter	. . .	Concord.
Treasurer, John C. Thorne	. . .	Concord.

Ladies' Humane Society, Portsmouth.

President, Mrs. Nathan F. Mathes	. . .	Portsmouth.
Secretary and Treasurer, Mary R. Lynam	. . .	Portsmouth.

New Hampshire Society for the Prevention of Cruelty to Children.

President, Mary A. Foster	. . .	Portsmouth.
Secretary and Treasurer, James R. May	. . .	Portsmouth.
State Agents, R. E. Hodgkins	. . .	Portsmouth.
William J. Ahern	. . .	Concord.
Counsel, John S. H. Frink	. . .	Portsmouth.

New Hampshire Society for the Prevention of Cruelty to Animals.

President, John J. Pickering	. . .	Portsmouth.
Secretary and Treasurer, James R. May	. . .	Portsmouth.
State Agent, R. E. Hodgkins	. . .	Portsmouth.
Counsel, John S. H. Frink	. . .	Portsmouth.

Keene Humane Society.

President, Horatio Colony	. . .	Keene.
First Vice-President, Edward A. Renouf	. . .	Keene.
Secretary, Mrs. Eugenie C. Madden	. . .	Keene.
Treasurer, Henry I. Mackintosh	. . .	Keene.
Counsel, Joseph Madden	. . .	Keene.

BY-LAWS OF THE STATE BOARD OF CHARITIES AND CORRECTION.

SECTION 1. The board shall have a chairman who shall be elected in January of each year at the regular meeting, or at a special meeting called for the purpose. It shall also have five standing committees as follows :

1. Almshouses.
2. Jails, Reformatories and Houses of Correction.
3. Orphans' Homes.
4. Dependent Children.
5. State Beneficiaries.

SECT. 2. The board shall have a secretary chosen from outside the membership of the board, whose duty it shall be to keep an accurate record of all proceedings, notify the members of meetings, conduct the correspondence, and with the assistance of the chairman prepare the biennial report, the report to be submitted to the whole board before being published. He shall also act as visiting agent to placed-out children and supervisor of volunteer visitors, and shall perform such other duties under the direction of the board as may rightfully belong to his office.

SECT. 3. The regular meetings of the board shall be held at the office in Concord (unless otherwise notified), on the third Wednesday of each alternate month beginning with January, and notices of said meetings shall be given to all members of the board, by mail, not less than four days in advance.

SECT. 4. Special meetings may be called by the chairman, the secretary, or any three members of the board.

SECT. 5. The reports of the secretary, standing committees and members, at the meetings of the board shall be presented in writing, and placed on file at the office.

SECT. 6. Three members of the board shall constitute a quorum for business.

The order of business shall be as follows :

1. Reading the minutes of the last meeting.
2. Secretary's report to the board.
3. Reports of standing committees.
4. Reports of members.
5. Unfinished business.
6. New business.

SECT. 7. These by-laws may be amended by a majority vote of members present at any meeting of the board, notice of such intended action having been previously given.

SPECIMEN BLANKS USED BY THE BOARD.

CARD RECORD AND VISITATION.

A

BLANK SENT FOR ORIGINAL INFORMATION.

THE NEW HAMPSHIRE STATE BOARD OF CHARITIES AND
CORRECTION.

BLANK FOR COUNTY COMMISSIONERS, SUPERINTENDENTS OF
ORPHANS' HOMES, COUNTY FARMS, ETC., FOR FACTS
REQUIRED FOR THE CARD RECORD OF THE DEPENDENT
CHILDREN OF THE STATE.

Name.....Where placed.....
TownCounty
Birthplace
Date of birth, or age.....
Sex.....Color.....Religion.....
Physical condition
Mental condition.....
Father's name.....
Birthplace
Religion
Occupation
Mother's name
Birthplace
Religion.....
Occupation.....
Address of parents or relatives.....
Facts about family.....
General remarks and description of child.....
..... Signed

B

CARD WHERE INFORMATION IS TRANSCRIBED.

[RIGHT SIDE.]

Name.....County.....No.....
 Date of birth.....Place of birth.....
 Town committed fromSex.....Color.....
 Religion
 Physical condition.....
 Mental condition.....
 Father's name
 Birthplace
 ReligionOccupation
 Mother's name
 Birthplace.....
 Religion.....Occupation.....
 Address of parents or relatives.....
 Facts about family.....

[OBVERSE SIDE.]

Where placed.....Date.....

 Transferred to.....Date.....

 Remarks.....

C

SUGGESTIONS TO VISITORS.

STATE OF NEW HAMPSHIRE.

OFFICE OF STATE BOARD OF CHARITIES AND CORRECTION

CONCORD, N. H.

SUGGESTIONS TO VOLUNTEER VISITORS.

First. Blanks for reports will be furnished each visitor. Please fill out two for each visit. Retain one yourself for future reference, and send the other to us.

Second. Please send in your reports quarterly, the first of June, September, December and March, but visit the child always as much oftener than this as the circumstances may require.

Third. If a child is discontented, or for any reason not well situated, or a change of place is desirable, please report the matter at once without delay, making such recommendation as you may choose upon a Special Report blank.

Fourth. There should be a separate report for each child, and all reports should be signed by the visitor, and dated upon the day the visit is made.

Fifth. Communications requiring an answer should *not* be made upon a report blank but by letter.

Sixth. Address all official communications to State Board of Charities and Correction, Concord, N. H.

Personal letters may be sent directly to the secretary. All communications will be considered as strictly confidential.

WILLIAM J. AHERN,

Secretary.

D

BLANK FOR VISITOR'S USE.

MEMORANDUM OF VISIT TO CHILDREN.

To
 With.....
 Of.....
 Character of place.....
 Physical condition of child.....
 Mental condition.....
 Clothing.....
 Lodging.....
 Food.....
 Schooling.....
 Church facilities.....
 Work.....
 Visited.....190
 By.....
 Remarks.....

E

BLANK FOR SPECIAL REPORT.

Concerning
 By Visitor.
 Date

F

BLANK TO BE USED IN VISITING COUNTY FARMS.

Name of county farm.....
 Date of visit
 Name of visitor.....
 Situated
 Distance from railway station.....
 How reached.....
 Superintendent.....
 Matron
 How long there.....
 Name and address of physician.....
 Number of inmates.....Men.....Women.....
 Children 15 years and under.....Total.....
 Children under 3 years.... Boys.... Girls... Total....
 Children over 3 years.... Boys.... Girls... Total....
 Number of insane.....Men.... Women... Total....
 Number of feeble-minded... Men.... Women.. Girls...
 Boys.... Total.....
 Number of epilepticsMen.... Women.... Girls....
 Boys.... Total.....
 Number of prisonersMen.... Women... Total.....
 Number and kind of buildings.....
 How lighted
 How heated.....
 Water supply
 Sanitary condition.....
 Number of bathtubsWater-closets
 Are sexes separated.....
 Dormitory doors locked at night.....
 Is there a night watchman, and if so how often does he make
 his rounds.....
 What provision in case of fire.....
 Diet, give list if possible

How often is fresh milk given.....
 How often butter.....
 How often fresh meat.....
 Hospital rooms, describe them.....
 Are church services held, and if so, how often and by whom

LIST OF CHILDREN AT FARM.

Name.....Age.....Where from.....

G

BLANK TO BE USED IN VISITING JAILS.

Name of jail.....Where situated.....
 Date of visit.....
 Name of visitor.....
 Name of jailer.....
 Name of matron.....
 Kind of building.....
 How heated.....
 Number of cells.....
 Are sexes separated.....
 Are young boys and first offenders separated from old
 criminals.....
 Sanitary arrangements.....
 How ventilated.....
 How drained.....
 Water supply.....
 How many bathtubs.....
 Number of prisoners—Men.....
 Women.....
 Do prisoners work.....
 Remarks.....

YEAR ENDING SEPTEMBER 30, 190..... STATE BOARD OF CHARITIES AND
CORRECTION.

Town giving assistance, County, Name of Overseer of Poor,

PERSONS ASSISTED. NAME.	* Pauper.	* Dependent soldier.	Family status (single, married, widow, divorced, living apart, deserted).	Number in family assisted.	Number of children in family under 16 years of age.	Amount of relief.	CAUSE OF NEED.
							.

* Please make cross (X) whichever head this comes under.

Prisoners.....	County House of Correction,	Superintendent.
----------------	-----------------------------	-----------------

[illegible]

APPENDIX.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN ROCKINGHAM COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors, and their families.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Atkinson	442	1	1	7	4	\$54.00	\$8.00	\$247.00	\$22.00
Auburn	682	4	14	9	155	182.00	83.15	1,432.68	2,037.18
Brentwood*	957	26	45	11	19	604.50	9.50	530.00	906.06
Candia	1,057	4	11	5	186	157.90	101.08	971.25	1,138.65
Chester	861	4	7	3	490	157.90	27.90	1,018.45	1,695.61
Danville	615	21	54	25	155	576.08	43.75	86.00	86.00
Deerfield	1,162	32	78	28	186	521.95	3.50	883.52	1,433.37
Derry	3,583	3	7	3	155	800.37	24.35	2,681.01	3,551.38
East Kingston	496	26	61	26	155	262.75	3.50	354.25	617.00
Epping	1,641	6	216	108	155	3.00	43.75	271.50	296.25
Exeter	4,922	75	18	7	155	120.00	2.25	130.00	236.75
Fremont	749	2	4	1	155	3.00	43.75	130.00	146.45
Greenland	607	4	4	6	155	78.00	2.25	121.00	199.00
Hampstead	823	3	9	4	155	182.00	2.25	598.00	782.25
Hampton	1,209	3	10	4	155	182.00	2.25	75.38	75.38
Hampton Falls	560	2	9	6	155	120.00	2.25	14.21	14.21
Kensington	524	4	9	4	155	78.00	2.25	1,282.00	1,584.00
Kingston	1,132	8	10	4	155	182.00	2.25	953.94	1,363.46
Londonderry	1,408	1	1	1	155	182.00	2.25	14.21	14.21
Newcastle	581	1	1	1	155	182.00	2.25	1,282.00	1,584.00
Newfields	647	1	1	1	155	182.00	2.25	953.94	1,363.46
Newington	300	1	1	1	155	182.00	2.25	14.21	14.21
Newmarket	2,892	21	53	18	273	386.08	22.84	1,282.00	1,584.00
Newton	924	8	20	8	273	386.08	22.84	953.94	1,363.46

North Hampton*	812	29	98	43	.....	454.20	37.85	1,092.05	1,586.10
Northwood.....	1,304	2	6	4	.....	156.00	9.75	65.00	230.75
Nottingham.....	638	2	6	4	.....	156.00	7.50	117.00	280.50
Plaistow.....	1,027	4	10	.....	.....	.....	.....	16,139.85	16,139.85
Portsmouth.....	10,637	.....	.....	.....	.....	.....	.....	764.00	1,924.00
Raymond.....	1,100	21	41	6	.....	1,170.00	.....	8.00	8.00
Rye.....	1,142	1	1	.....	.....	.....	.....	125.70	294.70
Salem.....	2,041	4	6	.....	.....	160.00	.....	338.00	442.00
Sandown.....	400	3	6	3	.....	104.00	.....	.....	.....
Seabrook.....	1,497	21	29	6	.....	117.50	.....	1,415.60	1,533.10
South Hampton*	297	.....	.....	.....	.....	.....	.....	.....	.....
Stratham.....	718	.....	.....	.....	.....	.....	.....	.....	.....
Windham.....	641	1	5	2	.....	10.00	2.55	.....	12.55
Total.....	51,118	342	828	322	1,465	\$6,629.93	\$403.87	\$32,258.07	\$39,291.87

The sum of \$7,718.47 was paid by the commissioners in addition to the above amounts.

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN STRAFFORD COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Barrington.....	1,208	11	16	3	.....	\$408.00	.....	\$180.00	\$588.00
Dover.....	13,207	95	250	116	.....	3,430.87	.....	4,338.43	7,769.30
Durham.....	996	3	5	3	.....	.....	.....	364.00	364.00
Farmington.....	2,265	23	48	20	.....	216.50	.....	327.83	544.33
Lee.....	545	3	6	1	10	156.00	\$5.00	88.00	249.00
Madbury*.....	336	.....	.....	.....	.....	.....	.....	.....	.....
Middleton.....	300	2	2	.....	.....	25.00	.....	111.00	136.00
Milton.....	1,625	3	.....	4	.....	.....	.....	48.00	48.00
New Durham.....	625	1	1	.....	.....	.....	.....	50.00	50.00
Rochester.....	8,466	71	177	62	559	864.06	.....	2,141.24	3,005.30
Rollinsford*.....	1,701	.....	.....	.....	.....	.....	.....	.....	.....
Somersworth.....	7,023	84	222	98	.....	502.04	.....	2,697.45	3,199.49
Strafford.....	1,040	11	27	8	.....	99.00	.....	541.78	640.78
Total.....	39,337	307	754	315	569	\$5,701.47	\$5.00	\$10,887.73	\$16,594.20

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN BELKNAP COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individ- uals in these as- sisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assist- ance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others as- sisted.	Total amount of re- lief given.
Alton.....	1,500	15	35	9	.....	\$298.71	\$18.65	\$370.98	\$688.34
Barnstead*.....	1,072	.....	.....	.....	.....	.....	.....	.....	.....
Belmont.....	1,294	6	17	9	.....	23.75	10.76	291.83	326.34
Center Harbor.....	422	1	1	1	.....	.....	11.20	10.90	22.10
Gilford.....	651	5	7	.....	.....	58.60	.....	132.00	190.00
Gillmanston.....	1,100	16	27	.....	.....	493.10	30.25	636.67	1,290.02
Laconia.....	8,042	64	233	131	.....	252.03	.....	2,379.48	2,631.51
Meredith.....	1,713	5	18	10	.....	204.52	.....	229.75	434.27
New Hampton.....	852	1	1	1	.....	.....	4.00	45.25	49.25
Sanbornton.....	944	2	3	.....	.....	.....	.....	226.24	226.24
Tilton.....	1,526	11	25	9	.....	69.46	.....	491.47	560.93
Total.....	19,526	136	367	170	.....	\$1,399.57	\$74.86	\$4,874.57	\$6,349.00

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN CARROLL COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Albany	210	1	1	1	2	.....	\$4.25	\$10.00	\$10.00
Bartlett	1,013	3	3	.....	.....	.....	.....	30.37	34.62
Brookfield	296	1	1	.....	.....	\$8.00	.....	.....	8.00
Chatham*	267	.....	.....	.....	.....	.....	.....	.....	.....
Conway	3,154	8	12	3	2	.....	41.25	468.25	509.50
Eaton	365	2	.....	.....	.....	.....	1.75	305.05	306.80
Effingham	600	5	7	.....	.....	.....	52.00	134.00	186.00
Freedom*	504	.....	.....	.....	.....	.....	.....	.....	.....
Jackson	624	2	5	3	.....	.....	.....	98.00	98.00
Madison	529	1	1	.....	.....	.....	.....	30.00	30.00
Monktonborough	901	2	6	4	.....	.....	.....	51.00	51.00
Ossipee	1,479	4	9	.....	.....	104.00	.....	25.00	129.00
Sandwich	1,077	1	.....	3	.....	.....	.....	65.00	65.00
Tamworth	1,050	2	8	4	1	70.76	.30	354.96	426.02
Tuftonborough	1,653	1	3	.....	.....	.....	.....	64.00	64.00
Wakefield	1,645	5	4	.....	.....	.....	39.75	243.75	253.50
Wolfeborough	2,390	14	27	9	.....	94.00	47.52	596.86	738.38
Total	16,857	52	87	31	5	\$276.76	\$186.82	\$2,476.24	\$2,939.82

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN MERRIMACK COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these families and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given others.	Total amount of relief given.
Allentown	1,496	30	88	45	4	\$698.57	\$3.00	\$1,350.15	\$2,648.72
Andover	1,179	11	32	15		191.96	2.38	225.74	420.70
Boscawen	1,455	16	72	44	2	116.06		526.01	644.45
Bow	617	8	11	1		178.00		219.25	397.25
Bradford	805	6	16	8		73.00		240.00	313.00
Canterbury	821	2	7	3			7.50	60.50	68.00
Chichester	538	2	6	3				135.00	142.50
Concord	19,632	128	394	203	10	1,724.00	134.45	5,376.96	7,226.31
Danbury	654	5	11	7		118.07	5.75	444.92	568.74
Dunbarton*	551								
Epsom	771	6	16	16		48.00	63.00	329.42	440.42
Franklin	5,846	55	234	100		353.11		2,974.13	3,327.24
Hanniker	1,507	19	31	7	112	232.70	55.50	969.94	1,258.14
Hill	603	5	5	5	30	130.00	22.50	142.07	294.57
Hocksett	1,665	13	43	16		84.17	67.40	689.67	761.24
Hopkinton	1,652	5	6	2	133		33.25	395.10	428.35
London	960	11	39	19		275.79		593.77	869.56
Newbury	424	5		2		104.00		483.00	587.00
New London	768	4	9*	3	5		5.00	286.82	291.82
Northfield	1,227	5	11	5		213.92		190.50	404.42
Pembroke	3,183	43	137	69		182.00		2,129.63	2,311.63
Pittsfield	2,129	24	58	23		717.25	131.65	1,307.70	2,156.60
Spaulsbury	604	10	23	5		256.82		430.01	686.83
Sutton	776	10	13	3		59.88		490.68	558.96
Watson	1,358	23	58	23		229.04	21.40	947.11	1,197.55
Waver	496	4	11	7	5	4.10	3.50	275.82	283.42
Wilmot	653	5	10	3	1	41.66	1.00	175.67	217.73
Total	52,430	455	1,361	657	302	\$6,032.00	\$567.28	\$21,917.37	\$28,507.65

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN HILLSBOROUGH COUNTY
FROM OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these families.	Number of children in these families and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Amherst.....	1,231	11	15	4	.....	\$205.00	\$25.50	\$408.00	\$728.50
Antrim.....	1,366	7	11	3	15	55.50	4.80	234.38	294.68
Bedford.....	1,148	2	7	4	.....	.....	.....	93.50	93.50
Bemington.....	667	4	.....	.....	10	.....	11.41	245.78	257.19
Brookline.....	505	2	2	.....	.....	43.15	29.00	16.86	80.01
Deering.....	486	11	28	11	.....	63.05	2.00	285.50	350.56
Francestown.....	603	8	25	14	.....	78.00	6.00	258.20	342.20
Goffstown.....	2,528	14	25	15	.....	474.60	.....	503.25	977.85
Greenfield.....	605	5	9	4	.....	236.00	.....	477.61	713.61
Hancock.....	1,008	.....	.....	.....	.....	.....	.....	.....	.....
Hillsborough.....	642	1	1	.....	40	.....	17.25	104.00	121.25
Hollis.....	2,254	17	27	4	100	370.10	31.25	577.45	978.80
Hudson.....	910	6	11	3	19	492.00	3.50	445.50	947.90
Litchfield.....	1,261	7	22	12	.....	154.00	.....	366.38	520.38
Lyndeborough.....	243	1	6	.....	.....	.....	.....	148.90	148.90
Manchester.....	686	2	6	3	.....	.....	.....	16.70	16.70
Mason.....	56,987	144	602	296	.....	80.00	.....	5,917.16	5,997.16
Merrimack.....	459	2	5	3	.....	.....	.....	76.26	76.26
Milford.....	1,231	5	5	.....	.....	112.00	15.10	104.00	231.10
Mont Vernon.....	3,739	30	57	20	.....	209.55	13.50	1,438.89	1,661.89
Nashua.....	463	2	4	.....	.....	52.00	.....	33.51	85.51
New Boston.....	23,868	104	417	238	.....	7.00	35.00	3,269.61	3,311.61
New Ipswich.....	1,062	7	13	5	19	177.75	20.00	326.71	524.46
Pelham.....	311	8	13	3	.....	.....	.....	464.41	464.41
.....	875	1	1	.....	7	72.00	5.25	.....	77.25

Peterborough.....	2,527	5	5	.....	189	.....	.....	47.25	518.00	565.25
Sharon.....	122	1	2	.....	.....	.....	.....	.....	130.00	130.00
Temple.....	313	2	2	.....	.....	.....	88.00	2.00	78.00	168.00
Weare.....	1,553	9	19	7	.....	.....	200.00	.....	393.00	653.00
Wilton.....	1,696	11	18	8	.....	.....	45.48	.....	353.94	399.42
Windsor*.....	38	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	112,640	429	1,360	661	408	\$3,366.09	\$274.81	\$17,285.45	\$20,926.35	

*No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN CHESHIRE COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief assisted, given all others.	Total amount of relief given.
Alstead	799	7	19	12	17	\$52.00	\$9.75	\$600.18	\$661.93
Chesterfield	981	3	8	4	...	2.00	...	92.24	94.24
Dublin	620	2	...	...	32	...	8.00	...	8.00
Fitzwilliam	987	5	7	...	79	84.45	11.85	255.72	267.57
Gilsom	590	5	3	1	31	...	12.40	173.96	270.81
Harrisville	791	4	9	...	...	125.91	...	295.75	421.66
Hinsdale	1,933	18	37	16	1	50.32	8.06	1,462.75	1,521.07
Jaffrey	1,891	9	29	18	128	...	51.20	642.41	693.61
Kearse	9,165	81	...	60	...	588.85	...	4,476.21	5,065.06
Marlborough	1,524	13	31	20	49	...	9.80	792.33	802.13
Marlow	488	11	35	21	19	...	5.70	654.86	660.56
Nelson	295	2	11	8	...	...	...	16.25	16.25
Richmond	459	7	15	5	...	212.21	...	261.85	474.06
Roxbury	855	3	3	...	8	...	4.00	383.00	387.00
Stoddard	100	...	...	...	...	...	...	...	...
Sullivan	367	3	10	6	...	...	...	250.64	250.64
Surry	287	8	8	...	...	208.00	...	305.87	513.87
Swansey	250	2	3	2	1	...	3.00	140.88	143.88
Troy	1,570	7	21	9	...	77.18	...	449.71	526.89
Walpole	1,527	10	39	25	43	1,083.48	12.75	640.24	1,736.47
Westmoreland	2,693	13	25	...	...	104.00	10.00	2,043.00	2,043.00
Winchester	875	4	7	2	...	551.34	...	203.15	317.15
Winchester	2,274	38	98	41	...	...	...	1,884.65	2,435.99
Total	31,321	250	418	250	408	\$3,139.74	\$146.45	\$16,025.65	\$19,311.84

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN SULLIVAN COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individ- uals in these as- sisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assist- ance.	Amount of relief given dependent soldiers and sail- ors.	Amount of relief given tramps.	Amount of relief given all others	Total amount of re- lief given.
Acworth.....	594	9	10	5	5	\$156.00	\$4.50	\$294.28	\$298.78
Charlestown.....	1,473	9	16	4	.....	.....	.....	910.00	1,066.00
Clarendon.....	6,498	134	398	179	19	1,008.05	31 28	4,638.46	5,677.79
Cornish.....	962	10	27	12	.....	.....	16 75	510.98	597.73
Croydon.....	372	8	23	8	.....	62.71	.....	427.85	490.56
Goslen.....	345	6	9	2	.....	76.00	3 65	98.41	178.06
Granham.....	374	3	10	6	6	38.90	6 00	62.34	101.84
Langdon.....	339	4	15	5	.....	52.00	.....	339.00	411.00
Lempster.....	391	5	19	10	.....	50.79	16 50	265.50	332.79
Newport.....	45	4	93	38	.....	583.87	58 34	1,662.57	2,394.78
Plainfield.....	1,114	12	19	1	.....	82.02	.....	541.93	623.96
Springfield.....	439	11	30	9	14	128.00	7 00	257.92	382.92
Springee.....	946	6	7	.....	20	208.00	6 00	335.00	549.00
Unity.....	572	6	15	8	.....	52.00	.....	169.35	221.35
Washington.....	464	.....	.....	.....	10	.....	5 00	.....	5.00
Total.....	18,009	268	691	287	74	\$2,498.34	\$155.02	\$10,534.19	\$13,187.55

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN GRAFTON COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief assisted all others.	Total amount of relief given.
Alexandria.....	630	18	45	19	1	.....	\$3.00	\$476.00	\$476.00
Ashland.....	1,289	2	10	2	1	.....	.....	45.25	48.25
Bath.....	1,006	.....	.....	.....	.....	.....	.....	79.91	79.91
Benton*.....	269	1	2	.....	.....	.....	.....	136.80	136.80
Bethlehem.....	1,261	2	2	.....	.....	.....	.....	799.61	805.79
Bridgewater.....	244	.....	.....	.....	.....	.....	.....	531.96	531.96
Bristol.....	1,690	14	37	18	.....	.....	.....	894.00	894.00
Campton.....	939	11	25	5	.....	.....	.....	72.00	72.00
Canaan.....	1,444	9	17	1	.....	.....	.....	63.26	63.26
Dorchester.....	308	2	2	1	.....	.....	.....	161.25	161.25
Easton.....	247	1	2	.....	.....	.....	.....	431.19	431.19
Ellsworth.....	1,077	13	29	10	1	\$220.82	1.00	553.01	553.01
Franklin.....	1,845	4	4	10	1	.....	.....	149.20	149.20
Grafton.....	655	5	11	4	.....	66.50	15.00	120.49	201.99
Groton.....	748	4	6	2	.....	.....	.....	254.00	254.00
Haverhill.....	346	5	7	6	25	.....	.....	157.03	157.03
Hebron.....	1,884	6	10	2	.....	.....	.....	520.00	520.00
Helderness.....	3,414	2	2	.....	.....	225.25	.....	97.00	322.25
Holderness.....	214	2	6	4	.....	.....	.....	198.16	198.16
Lancaster.....	662	4	11	5	.....	.....	.....	120.00	120.00
Lebanon.....	500	4	11	7	.....	82.16	.....	871.07	957.98
Lincoln.....	4,965	5	14	3	.....	.....	4.05	301.31	301.31
Lisbon.....	541	5	8	13	.....	55.50	.....	461.47	516.97
Lisbon.....	2,221	11	37	.....	.....	.....	.....	.....	.....

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN COOS COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Berlin.....	8,886	4	9	5	2		\$2.00	\$575.11	\$577.11
Carroll.....	710	1	3	1				61.84	61.84
Clarksville.....	307								
Colebrook.....	1,876								
Columbia.....	690	2	8	5				78.00	78.00
Dalton.....	592	11	28	10	2		2.00	325.75	327.75
Dummer*.....	349								
Errol*.....	305								
Gorham.....	1,797								
Jefferson.....	1,080	8	29	11		\$189.65	14.58	266.57	470.80
Lancaster.....	3,190	22	48	24		7.50		1,060.14	1,067.64
Milan.....	1,135	2	14	8		41.25		6.24	47.49
Northumberland.....	1,977	4	13	6		24.00		108.78	133.78
Pittsburg.....	687	4	5	2				234.00	234.00
Randolph.....	137	1	4	2				151.58	151.58
Shelburne*.....	283								
Stark.....	733	10	34	18	1	210.60		729.04	939.64
Stewartstown.....	1,150	5	28	16				118.77	118.77
Stratford.....	968								
Wentworth's Location*.....	61								
Whitewell.....	2,157	23	85	44		160.13		893.74	1,053.87
Total.....	29,070	99	308	152	5	\$633.13	\$18.58	\$4,610.56	\$5,262.27

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN ROCKINGHAM COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these families.	Number of children in these families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Atkinson.....	442	2	2	6	1	\$109.00	\$1.50	\$139.14	\$140.64
Auburn.....	682	6	16	5	5	31.50	1.25	354.25	524.50
Brentwood.....	957	4	12	13	14	376.00	3.50	114.35	149.35
Candia.....	1,057	19	40	5	11	18.00	6.00	836.60	1,188.60
Chester.....	861	8	15	5	3	297.28	5.50	382.50	388.00
Danville.....	615	12	20	2	245	153.51	86.90	156.00	174.00
Deerfield.....	1,162	15	20	32	151	745.39	22.65	591.07	818.35
Derry.....	3,583	29	78	9	4	104.00	1.10	583.00	687.00
East Kingston*.....	496	22	66	30	151	840.95	7.50	59.45	66.95
Ellington.....	1,641	36	137	77	254	104.00	15.00	134.00	245.50
Exeter.....	4,922	6	18	9	60	110.00	3.00	27.00	30.00
Greenland.....	749	1	2	4	3	88.00	3.25	516.61	604.61
Hampton.....	697	1	1	2	10	182.00	3.25	416.00	601.25
Hampton Falls.....	1,200	4	4	4	3	736.51	.....	662.40	390.00
Hampton.....	560	1	4	10	13	52.00	.....	871.00	1,398.91
Kingston.....	591	6	10	2	7	546.00	.....	988.00	1,417.00
Londonberry.....	1,132	7	28	13	9	326.80	.....	.....	.....
Newfields.....	351	5	28	7	.....	.....	.....	.....	.....
Newcastle.....	647	15	2	.....	.....	.....	.....	.....	.....
Newington.....	330	1	20	.....	.....	.....	.....	.....	.....
Newmarket.....	2,892	16	20	.....	.....	.....	.....	.....	.....
Newton.....	924	8	20	9	.....	.....	.....	.....	.....

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN ROCKINGHAM COUNTY FROM
OCTOBER 1, 1900, TO OCTOBER 1, 1901.—*Continued.*

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individ- uals in these as- sisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assist- ance.	Amount of relief given dependent soldiers and sail- ors.	Amount of relief given tramps.	Amount of relief assisted. all others	Total amount of re- lief given.
North Hampton*	812	17	65	32	.....	289.00	16.20	801.31	1,106.51
Northwood	1,304	3	18	5	.....	516.81	12.75	122.50	135.25
Nottingham	638	9	50	13	.....	.....	.....	288.15	804.96
Plaistow	1,027	23	66	18	.....	678.58	.....	2,912.00	2,912.00
Portsmouth	10,637	23	13	6	.....	.....	.....	706.91	1,445.49
Raymond	1,100	3	10	2	107	204.00	27.00	278.82	278.82
Rye	1,142	6	7	3	.....	135.02	.....	164.56	395.56
Salem	2,041	3	31	11	.....	70.00	.....	279.86	414.88
Sandown	400	23	.....	.....	.....	.....	.....	1,549.00	1,619.00
Seabrook	1,497	2	3	1	.....	.....	96.00	104.00	200.00
South Hampton*	297	5	19	10	26	49.22	5.80	76.27	131.29
Stratham	718	.....	.....	.....	.....	.....	.....	.....	.....
Windham	641	331	798	318	801	\$6,629.57	\$344.88	\$19,021.32	\$25,995.77
Total	51,118	.....	.....	.....	.....	.....	.....	.....	.....

The sum of \$17,602.65 was paid by the commissioners in addition to the above.

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN STRAFFORD COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 16 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Barrington.	1,208	19	38	8	.....	\$427.81	\$3.00	\$252.50	\$683.31
Dover.	13,207	151	369	174	.....	2,342.85	.....	4,997.29	7,340.14
Durham.	996	4	5	2	.....	.....	.....	336.00	336.00
Farmington.	2,265	29	58	14	.....	437.50	.....	742.70	1,180.20
Lee.	545	4	6	.....	18	160.00	9.00	78.00	247.00
Madbury.*	336	.....	.....	.....	.....	.....	.....	.....	.....
Middleton.	300	3	6	.....	.....	928.00	.....	.....	928.00
Milton.	1,625	4	14	6	.....	72.00	.....	35.72	107.72
New Durham.	625	5	27	17	.....	100.67	.....	324.55	425.22
Rochester.	8,466	36	72	40	471	393.00	.....	1,320.36	1,713.36
Rollinsford.	1,701	4	.....	.....	.....	144.00	.....	25.71	169.71
Somersworth.	7,023	68	248	123	.....	841.06	51.15	3,003.15	3,900.36
Strafford.	1,040	9	14	2	.....	7.82	.....	476.20	484.02
Total.	39,337	336	857	386	489	\$5,154.71	\$63.15	\$11,597.18	\$16,815.04

The sum of \$9,876.27 was paid by the commissioners in addition to the above.

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN BELKNAP COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individ- uals in these as- sisted families.	Number of children in these families 15 years and under.	Number of tramps calling for assist- ance.	Amount of relief given dependent soldiers and sail- ors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of re- lief given.
Alton	1,500	15	18	.....	.....	\$252.00	\$2.00	\$334.44	\$588.44
Barnstead	1,072	5	12	3	6	12.00	3.00	79.58	94.58
Belmont	1,294	11	14	4	.....	.....	26.25	167.71	193.96
Center Harbor	422	1	1	.....	.....	.....	.....	5.25	5.25
Gilford	661	6	6	.....	.....	32.00	.....	158.50	190.50
Gilmanton	1,100	15	24	5	.....	390.41	110.00	547.34	1,047.78
Laconia	8,042	6	22	13	.....	.....	.....	683.00	683.00
Meredith	1,713	1	1	.....	.....	7.65	.....	.....	7.65
New Hampton	852	2	6	3	.....	72.00	2.00	44.54	118.54
Sanbornton	944	3	2	1	.....	.....	.....	144.25	144.25
Tilton	1,926	6	15	6	.....	25.00	.....	219.12	244.21
Total	19,536	71	121	35	6	\$791.18	\$143.25	\$2,363.73	\$3,298.16

The sum of \$377 was paid by the commissioners in addition to the above.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN CARROLL COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individ- uals in these as- sisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assist- ance.	Amount of relief given dependent soldiers and sail- ors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of re- lief given.
Albany.....	210	3	18	12	.....	.....	.....	\$37.19	\$37.19
Bartlett.....	1,013	6	17	7	.....	.....	.....	200.67	200.17
Brookfield.....	296	2	5	3	.....	\$20.50	.....	119.50	119.50
Chatham*.....	267	.....	.....	.....	.....	.....	.....	.....	.....
Conway.....	3,154	1	4	2	2	.....	.....	104.00	104.00
Eaton.....	305	1	.....	.....	.....	.....	\$2.25	3.75	6.00
Ettingham.....	600	4	4	.....	.....	12.00	.....	60.50	72.50
Freedom.....	594	1	1	1	.....	.....	.....	7.50	7.50
Jackson*.....	624	.....	.....	.....	.....	.....	.....	.....	.....
Madison.....	529	2	2	.....	.....	.....	.....	24.34	24.34
Monticomborough*.....	901	.....	.....	.....	.....	.....	.....	.....	.....
Ossipee.....	1,479	6	14	5	.....	138.72	.....	73.23	211.95
Sandwich.....	1,077	1	1	.....	.....	.....	.....	70.50	70.50
Tamworth.....	1,050	3	5	3	.....	.....	.....	438.27	438.27
Taftonborough.....	663	2	2	.....	.....	.....	.....	235.40	235.40
Wakefield.....	1,645	4	11	6	42	.....	10.50	200.00	270.50
Wolfeborough.....	2,390	15	35	.....	.....	67.50	24.50	314.57	406.57
Total.....	16,857	51	119	38	44	\$238.72	\$37.25	\$1,958.12	\$2,234.09

The sum of \$1,193 was paid by the commissioners in addition to the above.

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN MERRIMACK COUNTY
FROM OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief assisted, all others.	Total amount of relief given.
Allenstown.....	1,496	32	114	67	.....	\$494.18	.....	\$1,746.14	\$2,240.32
Andover.....	1,179	14	37	24	3	141.62	\$0.70	571.73	714.10
Boscawen.....	1,455	15	60	33	.....	24.86	.....	300.38	325.24
Bow.....	617	9	16	6	.....	156.00	.....	453.00	609.00
Bradford.....	805	7	14	5	.....	151.29	.....	315.98	467.27
Canterbury.....	821	.....	.....	.....	2	.....	.....	.....	182.00
Concord.....	598	2	5	2	6	.....	6.00	176.00	182.00
Danbury.....	19,632	144	432	231	.....	2,143.19	110.25	7,923.22	10,176.66
Dunbarton.....	654	6	7	1	.....	103.76	1.50	114.02	219.28
Epsom.....	551	.....	.....	.....	5	.....	2.50	.....	2.50
Franklin.....	771	4	15	7	.....	517.76	.....	486.70	486.70
Henniker.....	5,846	51	222	129	34	334.36	140.87	2,798.23	3,456.86
Hill.....	1,507	16	29	7	78	150.24	41.00	915.75	1,291.11
Hocksett.....	603	4	5	.....	.....	.....	.....	100.00	250.24
Hopkinton.....	1,665	11	41	20	.....	.....	40.70	480.03	520.73
London.....	1,652	4	5	.....	180	.....	45.00	480.00	525.00
Newbury.....	960	12	43	22	.....	158.95	.....	589.13	758.08
New London.....	424	3	3	2	.....	104.00	.....	443.00	547.00
Northfield.....	768	6	7	.....	.....	.....	5.00	276.39	281.39
Pembroke.....	1,227	9	21	8	.....	95.00	6.88	237.71	339.59
Pittsfield.....	3,183	44	153	90	.....	245.52	.....	2,437.52	2,683.04
Salisbury.....	2,129	26	68	33	.....	600.12	.....	1,635.51	2,235.63
Sutton.....	604	7	16	4	.....	128.00	.....	354.00	482.00
Warner.....	776	11	15	2	.....	68	6.00	339.16	339.84
Webster.....	1,358	15	30	8	.....	67.00	.....	563.16	630.16
Wilnot.....	496	2	5	3	.....	132.00	.....	52.00	184.00
Wilnot.....	653	4	9	3	.....	44.31	.....	261.82	306.13
Total.....	52,430	458	1,372	707	308	\$5,801.84	\$408.40	\$24,060.63	\$30,270.87

The sum of \$1,367.55 was paid by the commissioners in addition to the above.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN HILLSBOROUGH COUNTY
FROM OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Amherst.....	1,231	10	14	3	..	\$62.78	\$18.50	\$342.00	\$523.28
Antrim.....	1,366	6	11	5	18	72.00	5.00	322.00	399.00
Bedford.....	1,148	3	5	1	..	..	..	39.46	39.46
Bellingham.....	667	5	..	..	34	..	7.39	387.15	394.54
Brookline.....	505	..	..	..	..	..	11.50	..	11.50
Deering.....	486	6	11	5	..	24.92	..	76.63	101.55
Francesstown.....	693	5	16	6	..	78.00	..	264.46	342.46
Goffstown.....	2,528	19	36	13	..	339.24	..	420.16	759.40
Greenville.....	605	8	35	..	..	335.96	..	234.86	570.82
Greenville.....	1,608	3	2	..	..	..	..	156.00	156.00
Hancock.....	642	2	3	..	..	52.00	20.00	65.50	137.50
Hillsborough.....	2,254	7	8	1	2	7.08	..	269.29	276.37
Hollis.....	910	4	5	..	11	..	5.50	312.00	317.50
Hudson.....	1,261	9	13	2	..	384.52	..	271.41	655.93
Litchfield.....	243	1	2	..	..	..	..	120.00	120.00
Lyndeborough.....	686	3	9	4	..	52.00	..	127.91	179.91
Manchester.....	56,987	193	722	385	..	190.00	..	8,425.06	8,615.06
Mason.....	459	2	7	4	..	..	..	142.62	142.62
Merrimack.....	1,234	8	..	..	..	100.00	5.98	469.21	575.19
Millford.....	3,739	15	20	11	..	94.00	9.50	743.10	846.60
Mont Vernon.....	453	2	..	4	..	..	..	51.00	51.00
Nashua.....	23,898	56	207	135	..	7.00	..	3,182.19	3,189.19
New Boston.....	1,002	7	7	5	..	137.75	..	258.00	395.75
New Ipswich.....	911	5	7	..	..	..	2.20	386.62	388.82
Pelham.....	875	2	3	1	11	100.99	9.00	54.54	164.53

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN ILLSBOROUGH COUNTY
FROM OCTOBER 1, 1901, TO OCTOBER 1, 1902.—Continued.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Peterborough.....	2,527	4	4	.....	111	.....	\$27.75	\$116.00	\$443.75
Sharon.....	122	2	3	.....	.....	.....	.....	132.00	132.00
Temple.....	313	1	1	.....	.....	.....	5.20	26.33	31.53
Ware.....	1,553	2	4	.....	.....	\$212.00	3.50	.....	215.50
Wilton.....	1,696	13	19	.....	1	6.75	.71	595.89	603.35
Windsor.....	38	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	112,640	403	1,153	500	188	\$2,356.99	\$131.73	\$18,291.39	\$20,780.11

The sum of \$24,869.80 was paid by the commissioners in addition to the above.

* No aid granted.*

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN CHESHIRE COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Alstead.....	799	7	12	3	6	\$101.28	\$4.50	\$505.78	\$611.56
Chestertfield.....	981	8	11	2	37	.....	6.00	179.05	185.05
Dublin.....	620	.....	.....	.....	.....	.....	9.25	.....	9.25
Fitzwilliam.....	987	4	12	6	64	.....	12.80	517.74	530.54
Gilsum.....	590	7	8	2	.....	87.50	.....	169.17	256.67
Harrisville.....	791	2	4	.....	.....	165.00	.....	.....	165.00
Hinsdale.....	1,933	24	44	17	104	34.67	26.00	1,504.51	1,565.18
Jaffrey.....	1,891	9	38	26	130	.....	52.00	797.37	840.37
Keene.....	9,165	80	157	70	.....	436.69	.....	4,211.72	4,648.41
Marlborough.....	1,524	17	51	27	100	406.85	30.00	517.92	944.77
Marlow.....	488	7	19	7	10	.....	3.00	393.88	396.88
Nelson.....	295	1	5	3	.....	.....	2.50	40.39	42.89
Richmond.....	459	6	14	5	.....	214.21	.....	262.52	476.73
Rindge.....	855	6	9	3	7	.....	3.50	570.00	573.50
Roxbury*.....	100	.....	.....	.....	.....	.....	.....	.....	.....
Stoddard.....	367	2	4	2	.....	.....	2.25	118.50	120.75
Sullivan.....	287	.....	.....	.....	.....	.....	11.00	.....	11.00
Surry.....	250	1	2	2	.....	.....	.....	100.34	100.34
Swanzey.....	1,570	9	21	6	15	70.08	11.50	576.12	657.70
Troy.....	1,527	7	26	14	.....	1,091.00	.....	596.00	1,687.00
Walpole.....	2,693	12	18	6	.....	.....	.....	1,581.95	1,581.95
Westmoreland.....	875	1	2	.....	.....	.....	12.75	140.00	152.75
Winchester.....	2,274	34	91	39	.....	398.43	35.00	1,929.71	2,363.14
Total.....	31,321	244	548	234	473	\$3,005.71	\$212.05	\$14,712.67	\$17,930.43

The sum of \$78.00 was paid by the commissioners in addition to the above.

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN SULLIVAN COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Acworth.....	594	5	6	1	99	\$45.14	\$3.75	\$300.70	\$304.45
Charlestown.....	1,473	10	16	4	2	887.31	41.85	701.77	788.76
Claremont.....	6,498	90	284	138	2	26.00	7.28	2,815.14	3,709.73
Cornish.....	962	9	17	6	.....	.....	7.50	493.50	501.00
Croydon.....	372	6	19	8	.....	.....	2.00	350.71	378.71
Goshen.....	345	3	4	.....	.....	.....	5.25	139.77	145.02
Granham.....	374	1	4	3	6	.....	6.00	5.25	11.25
Langdon.....	339	1	1	.....	.....	.....	.....	170.00	170.00
Lempster.....	391	2	4	.....	.....	.....	6.50	126.01	132.51
Newport.....	3,126	24	36	19	.....	213.65	55.33	1,358.40	1,627.38
Plainfield.....	1,114	13	19	5	.....	74.51	3.50	844.08	922.09
Springfield.....	439	6	10	5	.....	43.25	.....	202.14	245.39
Sinapee.....	946	4	5	1	.....	104.00	.....	215.43	319.43
Unity.....	572	7	21	12	.....	.....	.....	249.11	249.11
Washington.....	464	2	8	5	.....	.....	3.00	76.21	79.21
Total.....	18,009	183	454	207	107	\$1,393.86	\$141.96	\$8,048.22	\$9,584.04

The sum of \$3,090.65 was paid by the commissioners in addition to the above.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN GRAFTON COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Alexandria.....	620	8	21	6	.....	\$83.00	.....	\$372.30	\$455.30
Ashland.....	1,280	12	27	9	.....	.....	.....	712.03	712.03
Bath.....	1,006	10	18	6	.....	.....	.....	257.03	257.03
Benton.....	1,201	1	2	.....	.....	.....	.....	11.00	11.00
Bethlehem.....	1,244	3	3	.....	.....	.....	.....	189.80	189.80
Bridgewater.....	1,060	9	19	7	.....	190.48	\$5.05	520.00	706.13
Bristol.....	999	9	23	4	.....	234.44	.....	202.05	436.89
Campton.....	1,444	3	3	.....	35	78.00	8.75	104.00	190.75
Canaan.....	308	1	1	.....	.....	.....	.....	7.50	7.50
Dorchester.....	249	1	9	7	.....	.....	.....	90.63	90.63
Easton.....	107	2	9	5	.....	.....	.....	231.00	231.00
Ellisworth.....	1,845	14	36	17	.....	120.40	.....	347.74	468.14
Enfield.....	655	2	.....	.....	.....	.....	.....	41.44	41.44
Fraconia.....	748	3	3	.....	.....	.....	6.25	88.07	94.32
Grafton.....	346	3	9	5	1	.....	3.44	240.69	244.08
Hanover.....	1,884	2	4	2	.....	.....	9.00	86.25	95.25
Haverhill.....	3,414	6	15	6	.....	312.00	.....	193.25	505.25
Hebron.....	214	1	1	.....	4	.....	3.00	52.00	55.00
Holderness*.....	662	.....	.....	.....	.....	.....	.....	.....	.....
Landaff.....	500	4	6	.....	.....	.....	.....	255.90	255.90
Lebanon.....	4,965	5	8	3	169	.....	7.15	744.53	751.70
Lincoln.....	541	4	17	10	.....	.....	.....	367.13	367.13
Lisbon.....	2,221	12	27	11	12	46.38	7.00	333.05	446.43

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN GRAFTON COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.—Continued.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given dependent soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Littleton.....	4,066	25	80	40	.....	\$161.28	.....	\$1,065.27	\$1,226.55
Livermore*.....	191	.....	.....	.....	.....	.....	.....	.....	.....
Lyman.....	426	3	7	2	.....	22.35	.....	28.25	50.60
Lyme.....	1,080	5	8	1	.....	.....	.....	535.85	535.85
Monroe*.....	545	.....	.....	.....	.....	.....	.....	.....	.....
Orange.....	213	2	2	2	.....	.....	.....	55.64	55.64
Orford.....	890	5	7	.....	.....	.....	.....	187.50	187.50
Piermont.....	637	2	3	.....	.....	.....	\$2.00	186.00	186.00
Plymouth.....	1,972	9	20	9	.....	216.00	.....	580.66	796.66
Rumney.....	837	10	22	9	21	6.30	68.00	419.81	494.11
Thornton.....	552	6	18	13	.....	275.00	.....	260.00	535.00
Warren.....	799	3	5	.....	31	125.00	10.85	290.00	425.85
Waterville*.....	50	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth.....	617	2	5	2	.....	.....	2.75	108.12	110.87
Woodstock.....	628	4	9	3	.....	.....	.....	487.42	487.42
Total	40,844	191	447	179	273	\$1,860.63	\$133.24	\$9,713.12	\$11,706.99

The sum of \$488.73 was paid by the commissioners in addition to the above.

* No aid granted.

STATISTICAL TABLE SHOWING AMOUNT OF OUTDOOR RELIEF GIVEN IN COOS COUNTY FROM
OCTOBER 1, 1901, TO OCTOBER 1, 1902.

NAME OF TOWN GRANTING ASSISTANCE.	Population.	Number of families assisted.	Number of individuals in these assisted families.	Number of children in these assisted families 15 years and under.	Number of tramps calling for assistance.	Amount of relief given to soldiers and sailors.	Amount of relief given tramps.	Amount of relief given all others assisted.	Total amount of relief given.
Berlin.....	8,886	55	183	96	.....	.....	.....	\$2,906.22	\$2,906.22
Carroll.....	710	4	12	7	.....	.....	.....	396.00	396.00
Clarksville*.....	307	.....	.....	.....	.....	.....	.....	.....	.....
Colebrook.....	1,876	3	6	4	.....	.....	.....	384.00	384.00
Columbia.....	680	1	2	.....	.....	.....	.....	5.02	5.02
Dalton.....	592	13	24	9	.....	.....	.....	491.85	491.85
Dunsmuir.....	349	1	2	.....	.....	.....	.....	.....	.....
Errol*.....	305	.....	.....	.....	.....	\$156.00	.....	.....	156.00
Garhan.....	1,797	14	41	21	.....	.....	.....	309.89	309.89
Jefferson.....	1,080	5	11	4	.....	61.50	.....	70.25	131.75
Lancaster.....	3,190	23	38	10	.....	.....	.....	1,272.29	1,272.29
Lincoln.....	1,135	3	3	.....	.....	.....	.....	189.60	189.60
Madison.....	1,977	5	16	8	.....	32.81	.....	287.69	287.69
Northumberland.....	687	12	35	17	.....	340.00	.....	437.00	777.00
Pittsburg.....	137	1	1	.....	.....	.....	.....	40.60	40.60
Randolph.....	283	.....	.....	.....	.....	.....	.....	.....	.....
Shelburne*.....	733	.....	.....	.....	.....	.....	.....	.....	.....
Stark*.....	1,150	3	3	.....	.....	.....	.....	145.89	145.89
Stewartstown.....	963	5	16	7	.....	.....	\$5.00	132.84	137.84
Stratford.....	61	.....	.....	.....	.....	.....	.....	.....	.....
Wentworth's Location*.....	2,157	23	83	42	.....	878.74	.....	1,456.87	2,371.61
Whitefield.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	29,070	171	476	225	.....	\$1,469.05	\$41.00	\$8,625.50	\$10,035.55

The sum of \$2,266.68 was paid by the commissioners in addition to the above.
* No aid granted.

FIRST

REPORT OF THE TRUSTEES

OF THE

New Hampshire School

FOR THE

Feeble-Minded

AT LACONIA

1902

PRINTED BY
THE JOHN B. CLARKE COMPANY
MANCHESTER, N. H.

OFFICERS FOR 1901-1902.

PRESIDENT.

JAMES B. TENNANT.

TREASURER.

WILLIAM J. AHERN.

SECRETARY.

FREDERICK W. SHONTELL.

TRUSTEES.

Gov. CHESTER B. JORDAN, *ex officio*.

JAMES B. TENNANT.

SUSAN C. BANCROFT.

FREDERICK W. SHONTELL.

WILLIAM J. AHERN.

DANIEL C. REMICH.

SUPERINTENDENT.

CHARLES S. LITTLE, M. D.

FOREMAN OF FARM.

BENJAMIN M. TOWLE.

FIRST REPORT OF THE TRUSTEES
OF THE
NEW HAMPSHIRE SCHOOL FOR THE FEEBLE-
MINDED.

*To His Excellency the Governor, the Honorable Council, and
the Legislature:*

The Trustees of the New Hampshire School for the Feeble-Minded, in accordance with the requirements of law, respectfully submit this, their first report:

The New Hampshire School for the Feeble-Minded was created by chapter 102 of the Laws of 1901, a copy of which is annexed to this report. Section 8 of said act provides that the board of trustees, as soon as appointed and organized, shall proceed, as soon as practicable, to purchase a suitable site for said school, and erect thereon and properly furnish and equip suitable buildings and structures to accomplish the objects set forth in this act. Pursuant to the commands in this section, the board of trustees, immediately upon their appointment, proceeded at once to search throughout the state for a suitable site for the school. After thorough investigation, covering nearly a year, the trustees decided to locate the home in Laconia, and purchased for the purposes of the school farms containing 247 acres of land.

These farms are beautifully situated on a rise of land about half way between Laconia and Lakeport, on the westerly side of Lake Opechee, and extend westerly to Lake Winnesquam. The land is in a good state of cultivation, well wooded, and has good buildings thereon, many of which can be used to good advantage for the purposes of the school.

The city of Laconia was the only municipality which offered any inducements for the location of the school within its limits. It has contracted with the state to provide, at its own expense, upon the line of the water company's pipes, as many hydrants as in the judgment of the chief engineer of the Laconia fire department will be sufficient for the protection of the buildings and other property of the school, and to construct, maintain, and light with electricity a street running from some suitable point upon the public highway, which passes through the land purchased, to the main buildings erected upon said land, for the purposes of the school.

As soon as practicable after purchasing the real estate, the trustees proceeded to purchase stock and equipment for the farm and put a foreman in charge to properly cultivate it; also to make such changes and repairs in the buildings already upon the farm as would make them suitable for the purposes of the school, and to procure plans and let the contract for the construction of a brick dormitory building, which they found to be absolutely necessary in order to put the school in operation. The changes and repairs of the old buildings and the construction of the new building are now practically completed, and the trustees expect to have all the buildings properly furnished and equipped, and the school in successful operation, on or before the first day of February, 1903.

In order to purchase a suitable site, properly stock and equip the farm, make necessary repairs and changes in the existing building, construct the new building and furnish all the buildings, the trustees have found it necessary to exceed the sum of money appropriated by the act.

JAMES B. TENNANT,
SUSAN C. BANCROFT,
DANIEL C. REMICH,
FREDERICK W. SHONTELL,
WILLIAM J. AHERN,

Trustees.

The foreman of the farm reports the following as the products of the farm for the year 1902:

40 bushels of carrots.	35 bushels of beets.
300 bushels of potatoes.	25 bushels of turnips.
350 bushels of corn on cob.	30 squashes.
8 tons of corn fodder.	85 barrels of apples.
2 tons of oats.	15 bushels of beans.
95 tons of hay.	560 cans of milk.

CHAPTER 102.—LAWS OF 1901.

AN ACT TO PROVIDE FOR THE CARE AND EDUCATION OF FEEBLE-MINDED CHILDREN.

*Be it enacted by the Senate and House of Representatives in
General Court convened:*

SECTION 1. The state shall establish and maintain a school for the care and education of the idiotic and feeble-minded, between three and twenty-one years of age, which shall be known as the New Hampshire School for the Feeble-Minded Children. All children supported by towns or counties in the state who, in the judgment of the selectmen of towns or county commissioners of the county or state board of charities, are capable of being benefited by school instruction, shall be committed to this institution.

SECT. 2. The governor shall, with the advice and consent of the council, appoint five persons, one of whom shall be a woman, to be trustees of such school, who shall serve without compensation except that they shall be reimbursed for any necessary expenses they may incur in the discharge of their duties as trustees. The trustees shall be appointed as follows: The first three to serve for two years, the next two for four years, and thereafter trustees shall be appointed to serve four years. Said trustees shall have the general management and supervision of said school, and one or more of said trustees shall visit the school as often as once a month, and said board of

trustees shall annually, on or before the first day of October of each year, furnish a report to the governor and council, containing a history of the school for the year and a complete statement of the accounts with all the funds, general and special, appropriated or belonging to said school, with a detailed statement of disbursements.

SECT. 3. The governor shall be, *ex officio*, a member of the board of trustees of said school and shall annually visit and inspect the same.

SECT. 4. All indigent and destitute children in this state, who are proper subjects for said school, and who have no parents, kinsmen, friends, or guardians able to provide for them, may be admitted as state charges, and all other children in this state who are proper subjects for said school, whose parents or other kinsmen bound by law to support such children are able to pay, shall pay such sum for care, education, and maintenance of such children as the trustees may hereafter determine; and such children and children from other states not having similar schools may be received into said school whenever there is room for them, providing there is room for them without excluding state charges, at a cost to such persons, or those who are responsible for their maintenance, of not less than three dollars and twenty-five cents per week.

SECT. 5. Whenever it is made to appear upon application to the judge of probate for any county, and after a proper hearing, that any child resident within said county, and who is not already in any almshouse, the Industrial School, or the New Hampshire Hospital, or supported by any town or county, is a fit subject for the New Hampshire School for Feeble-Minded Children, such judge may commit such child to said New Hampshire School for Feeble-Minded Children by an order of commitment directed to the trustees thereof, accompanied by the certificate of two physicians who are graduates of some legally organized medical college, and have practiced three years in this state, that such a child is a suitable subject for said institution. Whenever, upon such application, there is occasion for the judge of probate to attend a hearing on days other

than those fixed by statute as the regular days for the sitting of the probate court, he shall be allowed five dollars a day for his services and his expenses, which shall be paid by the county treasurer upon the certificate of the county commissioners.

SECT. 6. Any order of committal under this act shall be subject to appeal in the same manner, by the same persons, and to the same extent that decrees of the judge of probate appointing guardians over persons alleged to be insane are subject to appeal, and no commitment under this act shall bar *habeas corpus* proceedings, but the court upon *habeas corpus* proceedings may confirm the order of commitment whenever justice requires. Any inmate of the New Hampshire School for Feeble-Minded Children may be discharged by any three of the trustees, or by a justice of the superior or supreme court, whenever a further detention at the school is in their opinion unnecessary, but any person so discharged who was under sentence of imprisonment at the time of his commitment, the period of which shall not have expired, shall be remanded to prison.

SECT. 7. Feeble-minded children shall be admitted to the institution in the following order: First, feeble-minded children now in public institutions supported entirely at public expense; second, the feeble-minded children not supported as aforesaid; third, the feeble-minded children of the state not in any public institution, who have no parents, kinsmen, or guardian able to provide for them, or who are committed by a judge of probate; fourth, those residing within the state whose parents, kinsmen, or guardian bound by law to support such children are able to pay; fifth, children of other states whose parents or guardians are able and willing to pay.

SECT. 8. The board of trustees, as soon as appointed and organized, shall proceed as soon as practical to purchase a suitable site for said school and home, and erect thereon and properly furnish and equip suitable buildings and structures to accomplish the objects set forth in this act.

SECT. 9. Said trustees shall have power to make all necessary rules and regulations as to admission to the institution and

for the government and control of said institution and its inmates, and to do everything that is necessary to properly care for and educate the feeble-minded children of the state. All bills contracted by them in purchasing a site, erecting, repairing and equipping suitable buildings, and operating the institution for the next two years shall be audited by the auditor of the state treasurer's accounts, and the governor shall draw his warrant upon any money in the treasury to pay the same.

SECT. 10. A sum of money not exceeding thirty thousand dollars shall be appropriated under this act, to be used or expended for the purposes named therein within the next two years.

SECT. 11. All acts and parts of acts inconsistent with this act are hereby repealed and this act shall take effect on its passage.

[Approved March 22, 1901.]

TREASURER'S REPORT FOR THE YEAR ENDING SEPTEMBER 30, 1902.

RECEIPTS.

Received from the state treasurer.....	\$17,973.52
--	-------------

DISBURSEMENTS.

Real estate	\$11,100.00
Construction	3,447.80
Farm stock and implements.....	2,899.35
Labor	526.37
	<hr/>
	\$17,973.52

The vouchers for the above disbursements have been approved by the governor and council, and have been filed with the state treasurer.

Respectfully submitted.

WILLIAM J. AHERN,

Treasurer.

Industrial School of the State of New Hampshire.

FOURTH BIENNIAL REPORTS

OF THE

Trustees, Superintendent, and Treasurer,

TO THE

GOVERNOR AND COUNCIL,

October 1, 1900, to September 30, 1902, Inclusive.

VOL. II. . . . PART 4.

MANCHESTER:

PRINTED BY THE JOHN B. CLARKE CO.

1902.

OFFICERS.

TRUSTEES.

HON. JOHN C. LINEHAN, <i>President</i>	.	Penacook.
MRS. OLIVE RAND CLARKE, <i>Secretary</i>	.	Manchester.
HON. NATHAN P. HUNT	.	Manchester.
HON. O. S. BROWN	.	Salmon Falls.
HON. A. S. WAIT	.	Newport.
HON. E. E. TRUESDELL	.	Suncook.
H. W. BOUTWELL, Esq.	.	Manchester.

SUPERINTENDENT AND TREASURER.

TOM W. ROBINSON.

MATRON.

MRS. TOM W. ROBINSON.

TEACHERS.

MISS B. F. SCOVILLE.	MISS L. L. FARNUM.
MISS VERA KNOWLTON.	

OVERSEERS.

L. V. MORRILL	.	.	.	.	.	Head Farmer.
S. I. SPRAGUE	.	.	.	.	.	Assistant Farmer.
J. A. WILLIAMS	.	.	.	.	.	Boys' Yard.
H. W. BROWN	.	.	.	.	.	Steward and Boys' Kitchen.
C. B. CONNELLY	.	.	.	.	.	Watchman.
MISS H. M. SMITH	.	.	.	.	.	Sewing Room.
MISS M. J. B. BACHOP	.	.	.	.	.	Laundry.
MRS. H. A. STODDARD	.	.	.	.	.	Girls' Kitchen.

RIVERSIDE HOSIERY.

THOMAS FOX	.	.	.	.	.	Finishing Room.
T. SULLIVAN	.	.	.	.	.	Knitting.
E. KRAUT	.	.	.	.	.	Machinist.
MRS. M. MULLEN	.	.	.	.	.	Mending.
MRS. C. B. CONNELLY	.	.	.	.	.	Mending.

REPORT OF SECRETARY OF TRUSTEES.

The secretary of the board of trustees of the New Hampshire Industrial School is pleased to note an increasing interest on the part of the public in the institution, which is proving itself more and more, as the years go by, to be in fact as well as in name a *reformatory* for juvenile offenders. Unfortunately there is still a widespread misconception as to the real purpose of the school, the idea that it is a penal institution being largely prevalent. The mental, moral, and industrial discipline here maintained, under wise restraint and sympathetic, watchful care, by which these juvenile delinquents are trained to become capable, trustworthy, useful citizens, is not punitive, but formative.

There are some in whom the heredity of vicious impulse is apparently ineradicable, but a large proportion, if they remain long enough, are improved and profited by their discipline and instruction, and generally go out well equipped to make their own way in the world, and with a purpose to live clean, honest lives. Such as have no suitable home or friends are carefully looked out for when their terms expire by the superintendent or matron, and situations secured for them where they may be under good influences so far as possible.

It is a mistake to sentence a child for a short term, even if the offense is trivial. Where a short term is better for the child it is in the power of the trustees to release him, and often it is the only salvation for a boy or girl not inherently vicious to be kept away from the bad influences of the home environment. Many of these delinquents are the children of dissolute parents, whose only education has been that of the street, and whose first realization of order, and cleanliness, and gentleness, and disinterested kindness comes to them after their arrival at the state school.

There is pressing need of more room at the school in order to accomplish best results. At the time of the October meeting of the trustees there were at the school one hundred and twenty-seven boys and twenty-eight girls, the largest number ever recorded. These boys, large and small, have to be kept all together, in school, in the playground, and in the dormitory. Means should be provided so that the younger boys could be separated from the older, as they could thus be better instructed and more easily influenced by their teachers.

The girls are also crowded into one small dormitory, which is inconvenient and objectionable for other reasons. The erection of an isolation hospital might remove the congestion somewhat, by allowing the room now reserved for hospital purposes to be used for a girls' dormitory. But this does not give opportunity for separation of the boys, which can only be done by building an addition to the present structure, or the erection of a separate building for the girls' occupancy and putting the small boys in the apartments now assigned to the girls.

There has been a very marked improvement in the demeanor of the girls especially, during the past year or two. They have been fortunate in their teachers and officers, and under the watchful care of the matron, whose affectionate solicitude for their welfare they have come to appreciate, they prove themselves grateful by an evident desire to please and generally cheerful performance of their appointed tasks. The record of most of the girls who have been discharged from the school in the past few years is a very gratifying one, proving the genuineness of their reformation.

In the whole field of charities and corrections there is no work so important, or so grand in results, as the rescue from lives of crime and training for useful citizenship, of these youthful victims of vile environment or vicious heredity.

OLIVE RAND CLARKE,

Secretary of Board of Trustees.

REPORT

OF THE

SUPERINTENDENT AND TREASURER.

*To His Excellency the Governor, the Honorable Council, and
the Honorable Board of Trustees :*

GENTLEMEN,—We hereby respectfully submit the fourth biennial report of the State Industrial School for two years, ending September 30, 1902.

Number committed to institution since its commencement	2,047
Number in school September 30, 1900	147
Number received during year ending September 30, 1901	55
Number discharged at expiration sentence	41
honorably discharged	7
discharged on probation	3
pardoned by Governor	1
escaped	2
in school September 30, 1901	148
received during year ending September 30, 1902	59
discharged at expiration of sentence	36
discharged on probation	8
honorably discharged	6
released by order of the court	4
escaped	4
sent to alternate sentence	1
deaths	1
in school September 30, 1902	147

PARENTAGE.

American	.	.	.	.	.	.	.	.	58
Irish	.	.	.	.	.	.	.	.	33
French	.	.	.	.	.	.	.	.	48
Italian	.	.	.	.	.	.	.	.	1
Negro	.	.	.	.	.	.	.	.	2
Russian	.	.	.	.	.	.	.	.	1
English	.	.	.	.	.	.	.	.	2
German	.	.	.	.	.	.	.	.	1
Scotch	.	.	.	.	.	.	.	.	1

AGE WHEN COMMITTED.

At the age of 8 years	.	.	.	.	.	.	.	2
9 "	.	.	.	.	.	.	.	4
10 "	.	.	.	.	.	.	.	3
11 "	.	.	.	.	.	.	.	21
12 "	.	.	.	.	.	.	.	16
13 "	.	.	.	.	.	.	.	26
14 "	.	.	.	.	.	.	.	21
15 "	.	.	.	.	.	.	.	17
16 "	.	.	.	.	.	.	.	35
17 "	.	.	.	.	.	.	.	2

TERM OF COMMITMENT.

During minority	.	.	.	.	.	.	.	46
For the term of 7 years	.	.	.	.	.	.	.	5
6 "	.	.	.	.	.	.	.	5
5 "	.	.	.	.	.	.	.	14
4 "	.	.	.	.	.	.	.	15
3 "	.	.	.	.	.	.	.	18
2 "	.	.	.	.	.	.	.	30
1 "	.	.	.	.	.	.	.	14

OFFENSE.

For stealing	.	.	.	.	.	.	.	63
being stubborn, idle, and disobedient	.	.	.	.	.	.	.	48
truancy	.	.	.	.	.	.	.	10

For breaking and entering	9
assault	6
lewdness	4
drunkenness	3
arson	2
forgery	1
malicious mischief	1

COMMITMENT.

All are committed by complaint made by parent, guardian, or an officer for the transgression of some law, after a fair trial before police court or trial justice, and sentence given by them.

For the care, clothing, and education we get from the town or county from which they are sentenced \$1.50 per week, a sum quite insufficient for the purpose.

They are committed for various terms up to a minority sentence. In my last report, I urged the minority sentence for all. Another two years' experience only confirms my opinion in that matter.

The boy is sentenced for a year. He is sent to school and furnished some light employment, with the rest. He knows he has but a short time to stay, and his mind is generally occupied with thinking more about when he will get out than his lessons, and before he can be made to show much change for the better, his term of sentence has expired and he is released only, in nine chances out of ten, to return to his old companions and life of vice.

Sometimes that boy is soon again returned for some misdemeanor, with another light sentence, to go over the same thing again.

One boy we can think of was brought to the school for the third time to serve a short sentence, then released to return to his old habits, and at present is in a fair way to be a successful candidate for the honors of a state prison. A majority of the inmates come here with very little education, and with habits and vices that it takes time to eradicate.

We aim and try to reform, but reformation does not come in a minute. It is of slow growth, and has to be brought about

gradually. We have many hard cases with which we need all the patience at our command. Others are naturally bright and intelligent, and are sent here, evidently, for being with bad companions, from want of care and attention at home. These usually make apt scholars, and soon become a credit to our institution.

Many have done so well that they have been honorably discharged before the expiration of their minority sentence. As the board of trustees have full power to pardon any inmates at any time, we cannot see any objection to a minority sentence. But we are pleased to say that many who have staid their full time, or been honorably discharged, have remained on the right side, and are now engaged in some honorable occupation and are useful members of the community in which they live. We frequently receive letters from both boys and girls who have belonged to this latter class, in which they express their gratitude for the benefits they have experienced from the education and training received while inmates of our institution. These help give us increased courage to labor with those that remain.

When the boy or girl is discharged, we invariably find a situation for those who need them, trying to find such as are suited to their taste and capacity. They are all furnished a new suit of clothes when entering and also when leaving the institution; also with free transportation to their homes or places of employment, and the girls are always accompanied by the matron or some suitable person.

APPROPRIATION.

The legislature of 1901 gave us an extra appropriation of \$6,800, the expenditure of which may be found in the proper place in this report.

HEALTH.

During the spring of 1902 we had ten cases of diphtheria, including one officer and nine of the inmates, all of whom recovered, with the exception of one of the inmates.

A thorough investigation found the disease did not originate in the school. All the patients were removed, nine being sent

to the city isolation hospital, and the greatest care was used to prevent the spread of the disease. The additional trouble and expense incurred in caring for these patients outside the institution, and at such a distance, clearly show the need of an isolation building upon our own grounds.

MORAL IMPROVEMENT.

We have the usual morning and evening devotions, and lessons in the Bible are given every Sunday forenoon to both boys and girls.

The religious services Sunday afternoon are in charge of the Young Men's Christian Association, as heretofore, to whom we continue to pay the sum of one hundred and fifty dollars every year. The clergymen of the city preach in turn, gratuitously, for our benefit. The religious welfare of our Catholic inmates is well looked after by Rev. Fathers Brennan, Delaney, Scott, Brophy, and others.

SCHOOL.

All the inmates are required to attend our school and receive instruction in all the common English branches. Considerable attention is given to music, with profit and pleasure. We have been very fortunate with our teachers. Miss Belle F. Scoville, with us for many years as principal, still remains in that position, and, with her assistants, has rendered very efficient service in this department.

Number scholars in first grade	.	.	.	.	.	3
second grade	.	.	.	.	.	15
third " "	.	.	.	.	.	40
fourth " "	.	.	.	.	.	27
fifth " "	.	.	.	.	.	35
seventh " "	.	.	.	.	.	21
eighth " "	.	.	.	.	.	6

All of our girls are given a good practical knowledge of housekeeping and sewing, and are taught to make and mend their own garments, repair the boys' clothing, and are also instructed in fancy work. They also do all the cooking in the officers and girls' kitchen, under direction of a competent instructor.

The boys when not attending school are engaged in the hosiery, on the farm, at carpenter work, or any of the many duties at the institution. The cooking at the boys' kitchen is done by them.

Many are capable of becoming good mechanics, and most of the repairs about the farm and buildings are done by the boys, under the direction of our overseers.

RECREATION.

We allow plenty of time for amusements. In croquet, basket ball, and other games on the lawn in the proper season, the girls find pleasure, and the boys, on their playground, enjoy baseball and other athletic games. We endeavor to keep our smaller boys away from the larger as much as possible, and all the amusements are under the personal supervision of the matron and overseers. Lately we have been devoting considerable time to military drill.

LIBRARY.

Through the income derived from the donations received for that purpose, we have been enabled to increase our library, and at the present time it is well supplied with books suitable for the age and capacity of our inmates, to which we are constantly making additions.

ANNUAL EXAMINATION.

The interest by the public in our annual examinations is increasing, as shown by the large number of visitors on each occasion. Declamations, reading, music, singing, and exhibition of art work by the pupils, remarks by the president, members of the board of trustees, and others, are the usual exercises, and at that time presents to those that merit them are given, and such of the boys and girls as are found deserving are honorably discharged.

BUILDINGS AND IMPROVEMENTS.

Our buildings remain the same, but have been given a general overhauling,—new steam pipes and heaters, and the old placed

in thorough repair; steel ceiling in front hall, standpipes with hose attached for fire purposes placed on each floor, and the usual minor repairs. We have added to our water supply from several large springs, one of which is capable of furnishing 10,000 gallons of water per day; also fitted up a large cellar with racks for vegetables, and cemented the floor.

RIVERSIDE HOSIERY.

In December last, the lease of the hosiery department to Mr. H. P. Ray, who had heretofore conducted it, having expired, it was decided by the trustees not to grant a renewal, but to continue the business ourselves, under the name of Riverside Hosiery. As the machinery used by Mr. Ray was owned by him, we were obliged to purchase everything new for our mill, which made it seem to be an expensive undertaking. Although it has not been in operation long enough to enable us to give a full account in the present report, the business done to date would indicate the decision by the trustees to have been a wise one.

THE FARM.

Our farm stock consists of one bull, eighteen cows, and seven horses. We make our own butter, as usual, with profit, and have given much attention to the land, and give herewith a list of the quantity and value of the products.

SEASON OF 1901.

50 tons	English hay	.	.	.	.	.	\$900.00
9	" oat fodder	.	.	.	.	.	108.00
75	" corn "	.	.	.	.	.	375.00
125	" silo "	.	.	.	.	.	625.00
1,436	bushels field corn	.	.	.	.	.	718.00
1,246	" potatoes	.	.	.	.	.	747.60
180	" onions	.	.	.	.	.	180.00
40	" turnips	.	.	.	.	.	20.00
60	" beets	.	.	.	.	.	30.00
700	" sweet corn on ear	.	.	.	.	.	175.00
40	" tomatoes	.	.	.	.	.	30.00

50 bushels cucumbers	.	.	.	.	.	\$25.00
175 " beans	.	.	.	.	.	175.00
45 " peas	.	.	.	.	.	45.00
24 " strawberries	.	.	.	.	.	76.80
75 " carrots	.	.	.	.	.	37.50
275 " mangel-wurzels	.	.	.	.	.	100.00
18 " parsnips	.	.	.	.	.	9.00
25 " beans thrashed	.	.	.	.	.	75.00
10,000 pounds cabbage	.	.	.	.	.	75.00
2,000 " rhubarb	.	.	.	.	.	10.00
4,000 " melons	.	.	.	.	.	20.00
150 bunches celery	.	.	.	.	.	15.00
Hogs killed, veals, etc	.	.	.	.	.	804.00
Milk and butter	.	.	.	.	.	2,044.00
						<hr/>
						\$7,419.90

SEASON OF 1902.

7 tons rye straw	.	.	.	.	.	\$105.00
51 " English hay	.	.	.	.	.	867.00
15 " oat fodder	.	.	.	.	.	180.00
159 " corn "	.	.	.	.	.	600.00
125 " silo "	.	.	.	.	.	625.00
11 " mangel-wurzels	.	.	.	.	.	187.00
1,560 bushels field corn	.	.	.	.	.	624.00
1,220 " potatoes	.	.	.	.	.	793.00
160 " onions	.	.	.	.	.	160.00
215 " turnips	.	.	.	.	.	55.00
120 " beets	.	.	.	.	.	72.00
600 " sweet corn on ear	.	.	.	.	.	150.00
40 " tomatoes	.	.	.	.	.	25.00
35 " cucumbers	.	.	.	.	.	35.00
45 " beans	.	.	.	.	.	45.00
110 " peas	.	.	.	.	.	110.00
10 " strawberries	.	.	.	.	.	32.00
130 " carrots	.	.	.	.	.	65.00
60 " parsnips	.	.	.	.	.	30.00
20 " beans thrashed	.	.	.	.	.	60.00
2,000 pounds cabbage	.	.	.	.	.	20.00

2,000 pounds rhubarb	\$20.00
Currants	5.00
6,000 pounds squashes	60.00
500 bunches celery	25.00
5,000 heads lettuce	50.00
1,000 bunches radishes	20.00
350 barrels apples	250.00
Hogs killed, veals, etc.	729.00
Milk and butter	2,135.25
	<hr/>
	\$8,134.25
Value farm products, 1901	\$7,419.90
“ “ “ 1902	8,134.25
	<hr/>
Total for 2 years, 1901, 1902	\$15,554.15

ACKNOWLEDGMENTS.

We have been favored the past two years with many donations for which we wish to express our thanks.

From the New Hampshire Clubs we have received one hundred volumes of interesting books. Hon. E. E. Truesdell of Suncook has enriched our library by a gift of fifteen volumes and G. E. Austin, Esq., of Suncook has donated to our library ten volumes of interesting books.

We have received magazines and papers from the following: Calumet and Salmon Clubs of this city, Dr. C. W. Clement, Dr. F. F. Fisher, Miss Elsie Fairbanks, Mrs. D. L. Robinson, J. H. DeCoursey, of Manchester, Miss Ethel Porter, Bangor, Me., Mrs. M. C. Steele, Claremont, Mrs. Hoyt, Laconia, and Mrs. H. B. Chaplin, Concord.

From Mrs. McIntire we have received a fine lot of sheet music; from Mr. Eldridge, a lot of crepe paper and wreaths for decorations; from Messrs. C. M. Edgerly, William G. Berry, and J. B. Estey, some fine pictures for our walls; from Mrs. Campbell, a lot of potted plants and flowers.

Mrs. Armenia S. White of Concord has continued her custom of sending the boys and girls a generous supply of oranges and candy for Christmas. To Mrs. Charles H. Anderson of

this city we are indebted for a fine portrait of her father, the late Charles H. Bartlett, a former valued member of our board of trustees for many years. Mrs. Myrick has generously given her services teaching our girls methods of embroidery and fancy work.

We have received regularly from the publishers: "The Dover Enquirer," "Cheshire Republican," "The People and Patriot," "Portsmouth Journal," "Nashua Weekly Telegraph," "Morning Star," "Our Dumb Animals," "Whittier Boys' Industrial School Journal," "Reformatory Record," "The Guidon," "The Advance," "Christian Herald," "Every Other Sunday," "Star Monthly," "Our Companion," "Glen Mills Daily," and "Lyman School Enterprise," all of which furnish us with valuable and interesting reading.

In behalf of our school we wish to thank all these kind donors.

To our teachers and overseers, who have rendered us valuable and efficient services, we desire to express our thanks. To the board of trustees for their advice, support, and encouragement we are most grateful and hope to merit their continuance.

TOM W. ROBINSON,
Superintendent.

DETAILED ACCOUNT OF CASH RECEIVED FROM OCTOBER 1, 1900, TO OCTOBER 1, 1902.

Oct.	1.	From State Treasurer, quarterly appropriation	\$1,500.00
	2.	Merrimack county, for board	117.00
	3.	Sullivan " "	283.94
		Gilsum, for board	19.50
	4.	Hillsborough county, for board	602.36
		Grafton county, for board	107.78
		Carroll " "	117.00
	5.	Greenville, for board	19.50
	6.	Cheshire county, "	136.50
	8.	T. J. Hourihan, "	10.00
		Misses Ross, "	24 00

Oct.	9.	From Wm. Hourihan, for horse keeping	\$13.00
	11.	Portsmouth, for board . . .	87.64
		Nashua, " . . .	262.07
		Manchester, " . . .	473.36
	13.	Wolfeborough, for board . .	39.00
	17.	George Brown, for rent . .	5.00
		Dover, for board . . .	30.64
		Pittsfield, " . . .	4.50
		Belknap county, for board . .	58.50
	20.	Coos " " . . .	19.50
	22.	Exeter, for board . . .	26.36
	25.	William G. Everett, for shoat .	5.00
	26.	Strafford county, for board .	55.50
Nov.	3.	Rockingham county, for board .	187.93
	7.	Misses Ross, for board . .	24.00
		T. J. Hourihan, for board . .	10.00
		E. W. Sanborn, for keeping horse	50.00
	17.	B. F. Wheeler, for rent . .	7.00
	21.	P. C. Cheney Co., for rags . .	16.40
	28.	Ashland, for board . . .	19.50
Dec.	1.	Mr. Follansbee, for work . .	2.00
	7.	George Brown, for rent . .	10.00
		Misses Ross, for board . .	24.00
		T. J. Hourihan, for board . .	10.00
	18.	Mr. Johnson, " . . .	42.00
		Epping, " . . .	12.64
	21.	H. O. Chase, for use of pasture .	40.00
	24.	vegetables and merchandise . .	4.25
	31.	S. I. Sprague, for sundries . .	6.00
		J. H. Wiggin & Co., for vegetables and hogs	38.64
		Manchester Stocking Co., for labor	1,025.40
1901.			
Jan.	1.	State Treasurer, quarterly appropria- tion	1,500.00
		Belknap county, for board . .	58.50
		Cheshire, " " . . .	138.43
	2.	Gilsum, for board	19.50

Jan.	4.	From Coos county, for board . . .	\$19.50
		Bath, " . . .	101.36
		Greenville, " . . .	16.29
		Misses Ross, " . . .	24.00
		T. J. Hourihan, " . . .	10.00
		Wm. Hourihan, for horse keeping . . .	13.00
	7.	Sullivan county, for board . . .	248.78
		Exeter, " . . .	39.00
		interest on $\frac{1}{2}$ James McKean Wilkins fund	70.00
	8.	Merrimack county, for board . . .	121.29
		Epping, " . . .	19.50
		Rockingham county, " . . .	195.00
		New Ipswich, " . . .	17.36
		Grafton county, " . . .	131.58
		Manchester, " . . .	460.28
	9.	Laconia, " . . .	19.50
	10.	Carroll county, for board . . .	117.00
	11.	Strafford " " . . .	19.50
		Nashua, for board . . .	381.64
	12.	Hillsborough county, for board . . .	605.36
	14.	flour and apples	6.00
	15.	barrel apples	2.00
	21.	Wolfeborough, for board . . .	39.00
	26.	B. H. Wheeler, for rent . . .	14.00
		calf skin . . . . .	.75
	30.	Ashland, for board	19.50
		Dover, "	39.00
		Laconia, "	19.50
Feb.	4.	T. J. Hourihan, for board . . .	10.00
		Misses Ross, "	24.00
		Manchester Beef Co., keeping horse . . .	12.50
	21.	Portsmouth, for board	78.00
Mar.	4.	T. J. Hourihan, "	10.00
		Misses Ross, "	24.00
	7.	Merrimack county, for board . . .	82.71
	15.	W. G. Johnson, "	42.00
	21.	Sullivan county, "	12.42
		Sullivan county, for attendance . . .	120.00

Mar.	23.	From calf skin and merchandise . . .	\$2.20
	30.	S. I. Sprague, for merchandise . . .	6.00
		Curtis Davis, for hay . . .	10.00
		B. H. Wheeler, for rent . . .	21.00
		J. H. Wiggin & Co., produce . . .	2.00
		Manchester Stocking Co., labor . . .	941.20
Apr.	1.	State Treasurer, quarterly appropriation . . .	1,500.00
		Merrimack county, for board . . .	156.00
		interest on Louise Penhallow fund for books . . .	30.79
		interest on ex-Gov. Frederick Smyth fund for books . . .	14.25
		Cheshire county, for board . . .	152.36
		Gilsum, " . . .	19.50
		Manchester, " . . .	19.50
	2.	Exeter, " . . .	39.00
	5.	Grafton county, " . . .	165.64
		Sullivan " " . . .	214.50
	6.	T. J. Hourihan, " . . .	10.00
		Misses Ross, " . . .	24.00
	8.	Wm. Hourihan, for keeping horse . . .	13.00
	9.	New Ipswich, for board . . .	19.50
	11.	Strafford county, for board . . .	17.57
	12.	Manchester, " . . .	445.29
		Nashua, " . . .	512.76
		Hillsborough county, for board . . .	585.00
	18.	Coos " " . . .	12.43
	19.	Carroll " " . . .	99.21
	22.	George Brown, for rent . . .	9.00
		calf skin . . .	.88
		Portsmouth, for board . . .	81.86
	23.	Dover, " . . .	43.07
May	4.	Laconia, " . . .	19.50
	8.	T. Hourihan, " . . .	10.00
		Misses Ross, " . . .	21.00
	20.	Epping, " . . .	19.50
	25.	calf skin . . .	.70
		attendance of officer . . .	3.00

May	31.	From calf skin	\$1.00
June	12.	Mr. Johnson, for board	42.00
	13.	Misses Ross, "	24.00
	14.	B. F. Wheeler, for rent	14.00
	15.	calf	3.00
	22.	Belknap county, for board	58.50
	29.	Ashland, for board	19.50
		Manchester Stocking Co., for labor	994.10
July	1.	State Treasurer, quarterly appro- priation	1,500.00
		Ashland, for board	3.00
		Gilsum, "	19.50
	5.	D. Johnson, for fertilizer	3.40
	6.	Cheshire county, for board	136.50
		Sullivan " "	208.07
	9.	Merrimack " "	140.14
		Misses Ross, "	24.00
		T. J. Hourihan, "	20.00
		Rockingham county, for board	365.57
	10.	interest on James McKean Wilkins fund	70.00
		Grafton county, for board	151.72
		Exeter, for board	39.00
	11.	Manchester, "	491.58
		Nashua, "	525.43
		Hillsborough county, for board	537.66
	12.	Mrs. Simons, for keeping horse	20.00
		Manchester, for board	19.50
	17.	Belknap county, for board	58.50
	31.	New Ipswich, "	19.50
		Laconia, "	19.50
Aug.	3.	Misses Ross, "	24.00
	6.	John E. Towle & Co., for hog	13.68
	10.	C. Stover, for trunk	1.98
	24.	Dover, for board	52.93
	28.	Epping, "	19.50
	29.	George F. Whitten, for keeping horse	3.85
	31.	Mrs. Simons, for keeping horse	10.00

Sept.	2.	From T. J. Hourihan, for board . .	\$20.00
		Misses Ross, " . .	24.00
		F. Ray, for veals	8 90
	3.	C. B. Brown, for keeping horse . .	17.50
	6.	interest on Wilson note . .	40.00
	10.	Mr. Johnson, for board . .	42.00
		Coos county, " . .	12.64
		Carroll " " . .	97.50
	18.	Wolfeborough, " . .	66.86
	21.	Dr. Straw, for keeping horse . .	23.00
	30.	S. I. Sprague, for sundries . .	7.00
		J. H. Wiggin & Co., for produce . .	24.49
		Manchester Stocking Co., for labor . .	1,070.10
		Alfred K. Hobbs, for keeping horse . .	15.22
Oct.	1.	State Treasurer, quarterly appro- priation	1,500.00
	2.	Cheshire county, for board . .	144.21
	4.	Misses Ross, " . .	21.00
	5.	T. J. Hourihan, " . .	10.00
		Sullivan county, " . .	172.50
	8.	Merrimack " " . .	156.00
		Gilsum, for board	19.50
		calf skin	1.12
	10.	Exeter, for board	30.86
		Carroll county, for board . .	97.50
		Grafton " " . .	157.29
	11.	Mrs. Simons, for keeping horse . .	47.00
		Hillsborough county, for board . .	470.80
		Manchester, for board . .	565.51
	12.	Rockingham county, for board . .	223.49
		Belknap " " . .	58.50
	15.	J. B. Estey, for keeping horse . .	19.60
	17.	Mrs. Olive Rand Clarke, for pork . .	15.00
	18.	Manchester, for board	19.50
	19.	calf skin	1.12
	26.	Dover, for board	58.50
	28.	New Ipswich, "	19.50
Nov.	5.	Laconia, "	19.50

Nov.	5.	From Misses Ross, for board . . .	\$24.00
		T. Hourihan, " . . .	10.00
	11.	Nashua, " . . .	456.44
	16.	Coos county, " . . .	29.36
	19.	Epping, " . . .	19.50
Dec.	6.	Misses Ross, " . . .	12.00
	7.	Whitney & Merrill, for pigs . .	8.00
	10.	Mr. Johnson, for board . . .	42.00
	23.	H. O. Chase, for use of pasture, 1901	40.00
	30.	A. K. Hobbs, for keeping horse .	3.78
		calf skin	1.43
	31.	S. I. Sprague, merchandise . .	10.00
		Manchester Stocking Co., for labor	929.10

1902.

Jan.	1.	State Treasurer, quarterly appro- priation	1,500.00
		Cheshire county, for board . .	142.71
		Exeter, for board	19.50
	2.	P. C. Cheney Co., for rags . .	1.50
	3.	Gilsum, for board	19.50
	4.	Sullivan county, for board . .	140.57
	7.	Carroll " "	70.50
	8.	Epping, "	19.50
		New Ipswich, "	2.36
		Grafton county, "	164.57
		Rockingham county, for board and clothing	229.49
	10.	Merrimack county, for board .	156.00
	11.	Hillsborough " "	472.29
		Manchester, "	564.64
	14.	T. J. Hourihan, "	20.00
		Miss Ross, "	12.00
		Wolfeborough, "	25.71
	18.	interest on James McKean Wilkins fund	70.00
	28.	Manchester, for board	19.50
	29.	Laconia, "	8.79

Feb.	1.	From Belknap county, for board . . .	\$58.50
	4.	Manchester Savings Bank . . .	1,643.46
		Hillsborough County Savings Bank . . .	501.45
		Merrimack River Savings Bank, interest on J. McKean Wilkins fund	1,213.63
	6.	W. G. Johnson, for board . . .	28.00
	11.	Miss Ross, " . . .	15.00
	13.	T. J. Hourihan, " . . .	12.50
	20.	Dover, for board	69.21
		Manchester Stocking Co., for labor	243.20
	21.	H. P. Ray, for barrels, and keeping horse	57.00
		D. Gove, for keeping horse	3.00
Mar.	3.	pig	6.50
	6.	Wm. G. Berry, for keeping horse	65.00
	11.	Coos county, for board	39.00
	12.	W. F. Whitney & Co., for seating chairs	10.20
	28.	W. P. Hunt, for keeping horse	28.90
	31.	S. I. Sprague, for merchandise	6.15
Apr.	1.	State Treasurer, quarterly appropriation	1,500.00
		P. C. Cheney Co., for rags	2.28
	2.	Cheshire county, for board	82.50
		Exeter, for board	19.50
	3.	Merrimack county, for board	132.64
	4.	Sullivan " "	156.00
	5.	Gilsum, for board	19.50
	7.	Epping, "	19.50
		Rockingham county, for board	214.50
	8.	Carroll " "	58.50
		Mrs. Curtis, for keeping horse	17.00
	9.	Grafton county, for board	175.50
	10.	Hillsborough county, for board	755.34
		interest on Louise Penhallow fund	30.68
		interest on Gov. Fred'k Smyth fund	52.50

Apr.	10.	From interest on Gov. Fred'k Smyth fund	\$14.25
	14.	Portsmouth, for board	331.07
	15.	Belknap county, for board	58.50
	16.	Manchester, for board	19.50
	22.	Coos county, "	39.00
	26.	Dover, for board	96.64
May	3.	Nashua, "	878.77
	13.	Manchester, "	553.50
	23.	calf skins	2.12
		flour, etc.	6.00
	30.	Fitzwilliam, for board	39.00
June	10.	Hall note	1,597.02
	30.	Carl B. Connelly, for keeping horse	26.00
		S. I. Sprague, sundries	18.00
July	1.	State Treasurer, quarterly appropriation	1,500.00
	3.	Grafton county, for board	181.08
	7.	Sullivan " "	168.58
	8.	Exeter, "	19.50
		Gilsum, "	19.50
		Coos county, "	39.00
		Fitzwilliam, "	39.00
		Carroll county, "	55.07
	9.	Merrimack county, for board	113.36
	12.	Rockingham " "	217.64
		Manchester, for board	576.21
		Hillsborough county, for board	559.50
	15.	Peterborough, "	30.43
	16.	Belknap county, "	49.72
	17.	Portsmouth, "	68.79
	19.	Cheshire county, "	76.72
	31.	Laconia, "	16.50
Aug.	1.	interest on James McKean Wilkins fund	70.00
	5.	Epping, for board	19.50
	11.	calf skin	1.37

Aug.	12.	From Dover, for board	. . .	\$97.50
	14.	Guaranty Savings Bank	. . .	219.69
	15.	W. S. Holt, for rags	. . .	1.61
	21.	Stark Mills, for hay	. . .	300.17
Sept.	3.	Manchester, for board	. . .	10.71
	8.	interest on Wilson note	. . .	40.00
	13.	Nashua, for board	. . .	551.38
	23.	crab-apples	. . .	7.88
	30.	S. I. Sprague, sundries	. . .	9.00
		C. B. Connelly, for keeping horse		26.00
		Mrs. Simons, " " "		30.00

LIST OF BILLS.

Quarter ending December 31, 1900.

Young Men's Christian Association, for speakers	. . .	\$37.50
Ira C. Merrill, for vinegar and veal	. . .	16.09
L. V. Morrill, for seed potatoes and corn	. . .	15.00
Stamps	. . .	10.00
Mrs. D. O. Fernald, for pears	. . .	.50
Ame & Co., for Standard Food	. . .	7.50
Butler, Sheldon & Co., for school books	. . .	16.00
Brown & Titus, for grinding	. . .	8.73
Fred C. Darrah, for repairing slate roof	. . .	26.34
W. P. Farmer, for shoes	. . .	32.40
Laport & Carpenter, for starch, bluing, etc.	. . .	16.78
Thompson, Brown & Co., for school books	. . .	9.00
Frederick C. Small & Co., for coffee	. . .	10.00
New England Telephone & Telegraph Co., for service	. . .	14.12
Sampson, Murdock & Co., for directory	. . .	2.00
G. G. Simonds, for crackers	. . .	6.60
James A. Scully, for chairs, matting, etc.	. . .	20.35
Empire Laundry Co., for felt covers	. . .	8.89
Oliver St. John, for apples	. . .	3.00
Rice, Sayward & Whitten, for 26 suits	. . .	80.00
A. L. Dyer, for shoe repairing	. . .	15.35
Lynah & Read, for coal	. . .	547.79

J. W. Roberts & Co., for flour and groceries . . .	\$294.14
J. R. Wentworth, for brushes	7.50
H. M. Kinports Co., for picture	1.75
Freeman & Taylor, for thimbles	2.90
American Tract Society, for mottoes	1.50
Silver, Burdette & Co., for writing books . . .	12.00
Hartford } W. W. Mattress Co., for bedsteads and springs	76.50
William Hayes, for cider barrels	3.75
Boston & Maine Railroad, for freight on coal .	127.61
Cavanaugh Bros., for manure one year . . .	225.00
H. B. Dunton, for attendance	3.00
J. A. Walkins & Co., for roach powder . . .	4.80
Adams Bros., for grain	181.90
City of Manchester, for old plank	3.00
James W. Hill Co., for dry goods	169.89
G. W. Dodge Shoe Co., for shoes	74.60
A. N. Clapp, for kerosene oil	5.17
Barlow & Nye, for quinces	1.38
D. J. Adams, for lock repairing	3.20
Boston School Supplies, for books	20.99
E. A. Stratton, for Bibles, ink, etc. . . .	4.33
Manchester Heating and Lighting Co., for shades	1.97
Thomas A. Lane Co., for water pipe, etc. . .	85.33
L. H. Wilson, for apples	2.00
Clark & Estey, for fancy goods	91.80
John M. Woodbridge, for hulled corn and hominy	9.10
Porter Bros. & Co., for buttons and eyelets . .	2.70
Kimball Carriage Co., for reins, whips, etc. . .	5.50
F. E. Wilson, for games, tumblers, etc. . .	18.40
Horace Marshall, for eggs	6.00
R. K. Horne, for jars, brackets, etc. . . .	7.42
Allen & Kimball, for clothing	228.74
Annis Flour & Grain Co., for grain and oil . .	30.62
J. M. Robinson, for shoe repairing	23.90
Charles M. Bailey, V. S., for medicine . . .	1.00
Henry W. Parker, for groceries	45.92
F. H. Thurston, for medicine	39.32

J. E. Paris, for hat	\$1.75
T. Pariseau & Co., for shoes	3.08
Fleischmann & Co., for yeast	16.80
Manchester Beef Co., for poultry	29.74
Besse, Eldridge & Co., for trunks and ties	10.89
Pike & Heald Co., for repairs	3.01
Head & Dowst Co., for building balcony, and wire	296.36
Hardy & Folsom, for dry goods	8.31
Sanborn Carriage Co., for repairs	27.35
Joel Daniels & Co., for painting, etc.	15.28
I. S. York, for harness repairs	6.55
Union Electric Co., for power and lighting	105.00
Union Publishing Co., for "Daily Union" and advertising	11.77
James Briggs & Son, for dippers, pans, etc.	5.65
Manchester Provision Co., for soap powder and soap	21.78
William E. Goodwin, for labor and repairs	9.42
Barton & Co., for dry goods and denim	164.92
Charles A. Hoitt & Co., for mattresses and merchan- dise	43.89
Daniels-Cornell Co., for groceries	77.88
Arthur J. Todd, M. D., for attendance	8.00
E. M. Slayton Co., for peas, eggs, etc.	70.60
Charles M. Floyd, for clothing and ties	22.28
George C. Lord, for bushel pears	1.25
J. H. Wiggin & Co., for groceries, etc.	96.56
Alfred K. Hobbs, for rubber belting, etc.	5.60
John Stark, for horseshoeing	16.12
Partridge Bros., for grain	203.25
J. Hodge, for window bands	2.28
Manchester Hardware Co., for hardware	40.60
John B. Varick Co., for hardware	90.11
George L. Stearns, for musical instruction	37.50
Temple & Farrington Co., for binding books	2.50
N. J. Whalen, for merchandise	8.15
E. D. Jameson, for meats, etc.	237.48
G. J. Hillsgrove, for horseshoeing	13.12

\$4,443.40

Quarter ending March 31, 1901.

Young Men's Christian Association, for speakers	\$37.50
F. J. Bixby, for plants	3.95
John B. Clarke Co., for "Daily Mirror"	6.00
New England Telephone & Telegraph Co., for service	12.55
M. S. Charest, for hat	1.00
G. H. Ellinwood, for veterinary dentistry	4.50
A. L. Dyer, for shoe repairs	47.30
F. D. Hanscom, for beef	15.90
John B. Hall, for drugs and medicines	13.30
Manchester & Concord Express	3.05
J. H. Mendell & Co., for repairs	24.23
Piper & McIntire, for tuning organ	1.50
Charles B. Wingate, for repairing shoes	1.25
Norfolk Manufacturing Co., for soap	12.50
New England Soap Co., for soap	11.03
R. G. Sullivan, for supplies	6.30
Charles R. Wood, V. S., & Son, for blister	2.50
Manchester Water-Works, for repairing hydrant and service	83.12
Henry W. Parker, for flour and fish	238.50
A. D. Maxwell estate, for ice	42.72
F. W. Woolworth & Co., for sundries	32.48
Manchester Beef Co., for meats	17.42
Bruno Bros., for merchandise	6.35
J. W. Roberts & Co., for flour and groceries	265.66
F. J. Larone, for painting carriage	13.00
W. P. Farmer, for shoes	20.00
Gutta-Percha Paint Co., for paints and oils	65.42
R. H. White & Co., for aprons	1.50
J. F. Burton, for mason work	7.25
Ray Brook Garden Co., for shrubs and plants	11.75
Jordan, Marsh & Co., for mugs, etc.	5.80
City Farm, for hog	15.00
Palmer & Garmon, for sharpening drills . . . . .	.83
Adams Bros., for grain	36.75
Charles H. Thayer & Co., for shoes	10.50

F. A. Dustin & Co., for chairs	\$16.80
Hinds & Noble, for speaker	1.00
Dodge & Dodge, for shoes	5.40
Stamps	20.00
B. F. Greer, for posts	26.64
H. M. Moody, for clothing	10.38
Annis Flour & Grain Co., for groceries and grain	130.71
Daniels-Cornell Co., for groceries	208.79
Frederick C. Small & Co., for beans, coffee, etc. .	102.76
Jones, McDuffee & Stratton Co., for crockery .	19.40
Boston & Maine Railroad, for freight	40.03
J. Hodge, for double windows, etc.	19.86
F. W. Russell, for getting Gibson	5.00
Nellie Cressey Smith, for hats	2.00
Warren W. Cutler, for wall paper	4.25
Moore & Preston, for coal	65.82
Manchester Heating and Lighting Co., for lamps, etc.	3.37
Mitchell Wing & Co., for soap	8.85
R. K. Horne, for dishes	5.35
G. G. Simonds, for crackers	8.73
H. K. W. Scott, for arresting Conway	10.00
A. Robie, hen manure and eggs	23.50
E. R. Barry, for supplies	5.25
A. L. Franks & Co., for mantel, and work	14.10
Sinclair & Fellows, for making cider	7.55
H. B. Dunton, D. V. S., for attendance	33.00
Dr. H. W. Boutwell, for attendance	50.00
J. J. Abbott, for papering and graining	48.28
James W. Hill Co., for dry goods	40.51
L. B. Bodwell & Co., for coal	600.14
The Outlook Co., for paper	2.88
Plumer & Holton, for clothing	1.75
National Conference of Charities and Corrections, for book	1.25
James A. Scully, for mattresses, etc.	49.58
Hardy & Folsom, for blankets and dry goods .	114.73
John E. Towle & Co., for meats	16.06
John M. Woodbridge, for hulled corn	8.75

Pike & Heald Co., for coffee pot	\$2.25
John Stack, for horseshoeing	16.75
Fleischmann & Co., for yeast	17.50
Manchester Slaughtering and Rendering Co., for soft soap and powder	16.96
L. M. Scannell, for girls' hats	3.00
Thomas A. Lane Co., for boiler repairs and heater	169.91
Mary E. Atwood, for nursing	70.00
Union Electric Co., lighting and power . .	105.00
J. M. Robinson, for repairing shoes . . .	25.35
Allen & Kimball, for clothing	53.84
W. P. Goodman, for supplies	36.39
I. S. York, harness repairs	8.20
G. J. Hillsgrove, for repairing and horseshoeing .	29.80
Partridge Bros., for grain	60.05
Charles A. Hoitt & Co., for mattresses and crockery	42.77
G. W. Dodge Shoe Co., for shoes	141.19
F. H. Thurston, for medicines	21.33
E. D. Jameson, for meats	196.34
Wheeler & Wilson Manufacturing Co., repairs and needles	5.20
Arthur S. Brown, for grinding grist . . .	30.03
J. H. Wiggin & Co., for groceries and meats .	92.04
Manchester Hardware Co. . . .	1.23
F. X. Chenette, for moving horse	3.00
E. M. Slayton Co., for beans, eggs, etc. . .	56.25
John B. Varick Co., for hardware	69.72
	<hr/>
	\$4,084.98

Quarter ending June 30, 1901.

Young Men's Christian Association, for speakers .	\$37.50
John Austin, for sausage	2.00
Granite State Grocery Co., for Nutritone . .	13.00
John Cronin, for rug	3.50
J. A. & A. W. Walker, for coal	78.21
Porter Bros., for buckles . . . .	.50
W. W. Rawson & Co., for garden seeds . .	21.49
Manchester Provision Co., for soap powder, lard, etc.	88.74

W. B. Cook, for tuning and repairing organ and piano	\$9.00
New England Telephone & Telegraph Co., for service	13.25
Julius Mintwork, for shrubs	2.00
George Holbrook, for repairs (Prince place)	16.00
Nelson Morris & Co., for meat	11.44
E. C. Brigham, for shoes	29.95
William Kent, for bird and seed	5.25
F. D. Wyman, for 1 dump cart	85.00
"Nashua Weekly Telegraph"	1.66
E. L. Gresley & Co., for 6 chairs	3.00
Daniel Jameson, for difference in cows	30.00
Expenses to National Conference of Charities and Corrections	92.50
Daniels-Cornell Co., for groceries and syrup	139.97
Dr. Henry W. Boutwell, for attendance	118.50
Allen & Kimball, for clothing	45.02
L. B. Bodwell & Co., for coal	234.52
Jordan, Marsh & Co., for plates	21.60
Jones, McDuffee & Stratton Co., for crockery	116.52
Rice, Sayward & Whitten, for clothing	203.25
S. B. Dickey, for barge hire	6.00
C. L. Jeffers, for 1 horse	150.00
L. V. Morrill, for seed potatoes and beans	10.00
Frederick C. Small & Co., for coffee and molasses	47.19
Union Electric Co., for power and lighting	70.00
Singer Manufacturing Co., for sewing machine	30.00
A. A. Nourse, for instruction	5.00
Dr. F. F. Fisher, for dentistry	10.25
William Ferren, for polish	2.00
J. G. Ellinwood, for boys' pictures	8.50
Dana K. Brown, for furniture	5.50
Besse, Eldridge & Co., for clothing	22.30
G. W. Dodge Shoe Co., for shoes	90.13
American Soap & Washoline Co., for washoline	10.01
Stamps	13.00
E. D. Jameson, for meats	143.01

Manchester & Concord Express Co.	\$2.75
Mitchell Wing & Co., for toilet paper and soap chips	19.15
Daniel Johnson, for sausage	7.25
Boston & Maine Railroad, for freight	38.43
Union Publishing Co., for advertising examina- tion	5.04
Ray Brook Garden Co., for plants and trimmings	9.50
J. W. Roberts & Co., for groceries	88.70
Miville & Deschenes, for clothing	7.25
A. L. Dyer, for repairing shoes	65.35
J. J. Abbott, for paper and hanging	13.39
Daniel W. Bill, for maple syrup	4.50
Annis Flour & Grain Co., for grain and groceries	283.81
Fleischmann & Co., for yeast during quarter . .	18.20
John M. Woodbridge, for hulled corn	8.40
William Marcotte & Co., for lot of pants . . .	50.00
James R. Carr & Co., wall paper (Prince place) .	15.02
James W. Hill Co., for dry goods	29.60
John Stack, for horseshoeing	17.92
Charles M. Floyd, for clothing	40.32
Sanborn Carriage Co., for painting and carriage re- pairing	44.00
W. P. Goodman, for prize books (Penhallow fund)	24.53
W. P. Goodman, for daily papers and supplies .	5.56
F. H. Thurston, for medicine	32.16
Frank W. Fitts, for fancy goods	95
E. M. Bryant & Co., for electric work	5.12
Adams Bros., for grain	69.70
Pike & Heald Co., for pans and repairs . . .	25.09
I. S. York, for harness repairs	5.80
Clark & Estey, for fancy goods	42.71
Partridge Bros., for grain	170.61
E. M. Slayton Co., for eggs and beans	49.20
Charles A. Hoitt & Co., for mattresses, pillows, etc.	100.39
Nellie Cressey Smith, for hats	2.75
Arthur S. Brown, for grinding grist, etc. . . .	15.53
Temple & Farrington, for merchandise	7.58
Temple & Farrington, for books (ex-Gov. Frederick Smyth fund)	23.01

Barton & Co., for dry goods	\$44.73
Hardy & Folsom, for dry goods	38.30
John B Varick Co., for hardware, phosphate, etc.	203.47
J. F. Burton, for mason repairing (Prince place)	27.10
J. H. Wiggin & Co., for fish, meats, and groceries	77.03
C. H. Durgin, for meat	63.97
G. J. Hillsgrove, for horseshoeing and carriage repairs	26.00

\$3,876.13

Quarter ending September 30, 1901.

American Express Co., for dressing	\$12.60
F. J. Bixby, for plants and shrubs	5.90
George L. Stearns, for musical instruction	37.50
A. S. Thomas, for 1 quilt . . . . .	.93
Harry P. Ray, for damaged card clothing	91.67
George Holbrook, for repairs	7.00
L. P. Labonte, girls' capes	4.50
J. A. & A. W. Walker, for coal	91.45
Y. M. C. A., for speakers	37.50
C. E. Quimby, for eggs	8.58
New England Telegraph & Telephone Co., for service	14.31
Darwin Simons, for mirror and chair	4.50
Porter Bros. & Co., for buttons	5.13
Pneumatic Hand Stamp Co., for stamp and ink	1.15
J. Y. McQueston Co., for kitchen ware	1.33
John B. Clarke Co., for postals, advertising, etc.	14.07
B. F. Welch, for hacking	1.90
Armour Packing Co., for soap powder	14.18
R. K. Horne, for kitchen ware	14.05
D. C. Elliott, for raspberries	10.35
J. S. Holt & Co., for soft soap	6.00
Manchester Hardware Co., for hardware	81.42
DeCourcy & Holland, for insurance	13.58
John A. Sheehan, for insurance	53.84
Clarence M. Edgerly, for insurance	27.14
William G. Berry, for insurance	81.42
Everett & Scott, for insurance	13.55

Piper & McIntire, for music	\$4.15
Jordan, Marsh & Co., for pans, etc.	8.95
John E. Towle & Co., for meats	39.54
E. R. Coburn Co., fireworks, etc.	12.85
Daniels-Cornell Co., for groceries	100.06
Western Union Telegraph Co.	1.05
Manchester Postoffice, for stamps	10.00
James E. Stone, for blueberries, etc.	15.00
C. H. Hutchinson, for labor	3.63
Manchester Street Railway, for specials	11.00
A. F. Abbott, D. V. S., for attendance	4.05
Moore & Preston, for coal	205.65
Manchester Slaughtering & Rendering Co., for soap	1.75
Henry W. Parker, for groceries	111.01
Alice G. Lovering, for typewriting	1.00
A. G. Hood, for shrubs, plants, etc.	10.20
John M. Woodbridge, for hulled corn	1.40
Adams Bros., for grain	52.15
Temple & Farrington, for books and supplies	6.83
John P. Squire Co., for hams	6.24
Manchester Provision Co., for merchandise	49.78
Bucklin & Chamberlain, for repairing washer and extractor	21.20
W. H. Colby, for fertilizer and nitrate	91.80
James A. Scully, for curtains, rods, etc.	6.93
J. Hodge, for window beading and lumber	13.81
G. W. Dodge Shoe Co., for shoes	118.90
L. V. Morrill, for meadow hay	42.00
John H. Barter, for merchandise . . . . .	.75
Rand & McNally, for map of world	2.54
Mrs. W. E. Colburn, for currants, etc.	2.40
Mitchell Wing & Co., for baskets, etc.	6.71
Frederick C. Small & Co., for coffee, tea, etc.	103.61
E. M. Bryant & Co., for fuses	3.75
Besse, Eldridge & Co., for shoes, extension cases, etc.	19.04
L. M. Scannell, for hats	3.00
New York Store, for dry goods	78.94
N. J. Whalen, for trunks and cases	8.75

Charles M. Floyd, for clothing and caps . . .	\$37.45
Clark & Estey, for fancy goods	13.42
Boston & Maine Railroad, for freight . . .	27.89
Barton & Co., for dry goods	8.97
Joel Daniels & Co., for finishing table . . .	.50
Nelson Morris & Co., for meats	5.03
Richard Ebbitt, V. S., for attendance . . .	12.50
James W. Hill Co., for gingham, capes, etc. . .	31.98
Annis Flour & Grain Co., for groceries . . .	199.56
G. J. Hillsgrove, for horseshoeing and repairing . .	7.20
Partridge Bros, for grain	212.72
Arthur S. Brown, for grinding corn	6.08
Thomas A. Lane Co., for electric work and repairs	31.55
F. Pariseau & Co., for shoes	1.98
E. M. Slayton Co., for eggs and produce . . .	63.28
Gutta-Percha Paint Co., for white lead . . .	48.90
J. W. Roberts & Co., for flour and groceries . . .	220.29
Hardy & Folsom, for dry goods	13.59
A. D. Maxwell estate, for wood and ice . . .	40.27
I. S. York, for harness repairs	13.55
C. H. Durgin, for meats	214.84
Union Electric Co., for power and lighting . . .	140.00
W. P. Goodman, for papers and supplies . . .	9.13
J. M. Robinson, for shoe repairing	28.35
John Stack, for horseshoeing	16.36
Charles A. Hoitt & Co., for fruit cans, spring, etc.	26.51
John B. Varick Co., for hardware	152.32
J. H. Wiggin & Co., for groceries, fish, etc. . .	100.85
Alfred K. Hobbs, for belting and tools . . .	15.22
Allen & Kimball, for clothing	61.81
F. H. Thurston, for medicines	17.04

\$3,616.01

Quarter ending December 31, 1901.

American Express Co., for manure	\$12.60
A. L. Dyer, for repairing shoes	10.78
Young Men's Christian Association, for speakers . .	37.50
New England Telephone & Telegraph Co., for service	14.70

Quinn & Co., for "Literature of All Nations"	
(Smyth fund)	\$15.75
Orison Hardy, for fruit trees, etc.	27.60
Leroy Mitchell, for filling silo	30.00
M. J. Heinz Co., for apple butter	11.16
Fred F. Fisher, for dentistry	8.50
Daniels-Cornell Co., for groceries	126.87
E. R. Barry, for merchandise	5.01
F. J. Bixby, for plums	3.75
Auburn Brush & Mop Co., for brushes	9.00
Silver, Burdett & Co., for reading-books	8.34
George D. Town, M. D., for consultation	5.00
Rice, Sayward & Whitten, for boys' clothing	161.50
J. W. Roberts & Co., for flour	207.50
Porter Bros. & Co., for buttons	7.45
Thompson, Brown & Co., for arithmetics	8.20
Nelson Morris & Co., for beef	5.45
Manchester Slaughtering & Rendering Co., for soft soap	1.75
Lynah & Read, for coal	106.96
Houghton, Mifflin & Co., for histories	6.80
Manchester Postoffice, for stamps	10.00
Edson C. Eastman, for a copy of Public Statutes	6 15
Prescott Chemical Co., for carboleum	2.25
Arthur S. Brown, for corn and grinding	15.34
Maynard, Merrill & Co., for school books	29.90
Ginn & Co., for school books	8.25
J. A. Walkins & Co., for roach powder	6.30
Frederick C. Small & Co., for molasses and coffee	77.70
L. B. Bodwell & Co., for coal	255.06
Cavanaugh Bros., for manure	225.00
Adams Bros., for grain	132.05
W. F. Landry, for stone	10.75
Allen & Kimball, for clothing	110.96
Ira C. Evans, for printing laws	12.50
Northern Ohio Blanket Mills, for blanket	1.75
Mitchell Wing & Co., for soap powder, etc.	43.85
Partridge Bros., for grain and cement	81.75

H. M. Moody, for clothing	\$37.50
F. W. Leeman, for Otis check and dress goods	160.35
National Biscuit Co., for crackers	6.58
G. W. Dodge-Shoe Co., for shoes	90.87
Charles R. Wood, V. S., & Son, for horse medicines and blister	10.00
American Soap and Washoline Co., for washoline	20.38
Manchester Hardware Co., for hardware	22.03
Manchester Beef Co., for beef and eggs	52.24
Manchester Provision Co., for lard and hams	37.50
F. W. Woolworth & Co., for sundries	44.57
Charles M. Floyd, for clothing	44.81
James W. Hill Co., for dry goods	290.56
Brown & Burpee, for spectacles for boys	13.40
Alfred K. Hobbs, for sole leather and findings	37.15
R. K. Horne, for kitchen furnishings	32.37
Boston School Supply Co., for school books	39.46
R. D. Gay, for needles, silk, etc.	3.60
Thomas J. Briggs, for stove linings and castings	7.50
Boston & Maine Railroad, for freight	6.20
Besse, Eldridge & Co., for cases and clothing	39.59
Fleischmann & Co., for yeast for six months	37.10
Clark & Estey, for fancy goods	73.09
Annis Flour & Grain Co., for groceries and grain	347.47
W. P. Goodman, for office supplies, papers, etc.	26.80
I. S. York, for harness repairs and brushes	9.70
H. F. W. Little, for filing saws	3.70
Sanborn Carriage Co., for carriage repairs	14.50
John B. Hall, for medicines	5.10
Henry W. Parker, for flour and groceries	542.75
J. H. Wiggin & Co., for groceries	71.23
Hardy & Folsom, for dry goods	71.55
Union Electric Co., for lighting and power	105.00
G. L. Stearns, for musical instruction	37.50
Charles A. Hoitt & Co., for house furnishings	55.45
John B. Clarke Co., for "Daily Mirror" to 1902	6.00
Barton & Co., for dry goods	42.51
F. H. Thurston, for medicines	29.45

John B. Varick Co., for hardware	\$121.14
E. M. Slayton Co., for turkeys	9.45
C. H. Durgin, for meats	161.16

 \$4,629.04

Quarter ending March 31, 1902.

H. H. Young, for difference in cows and for beef	\$21.20
Walter H. Baker & Co., for speakers, books, and dia- logues	4.17
John Stack, for horseshoeing	8.50
American Express Co., for manure	12.60
Young Men's Christian Association, for speakers . .	37.50
Mr. Leveen, for mask . . . . .	.75
Bon Marche, for cook book . . . . .	.98
W. H. Moore, for magazines	2.00
Richard Ebbitt, V. S., for services	3.00
Kimball Carriage Co., for boots, duster, etc. . . .	8.25
New England Telephone & Telegraph Co., for ser- vices	17.24
B. F. Shephard, for keys and repairing	1.80
L. Belli & Co., for merchandise	24.36
Manchester & Concord Express . . . . .	.85
Fred F. Fisher, for dentistry	9.50
Allen & Kimball, for suspenders and ties	12.47
Swift Provision Co., for soap	15.00
Hillsborough County Farm, for hog	15.00
A. & W. S. Heath, for shoes	22.95
Northern Ohio Blanket Mills, for blankets	38.00
Manchester Stocking Co., for hosiery	46.50
J. H. Ellinwood, for horse dentistry	3.00
George Holbrook, for flooring	7.50
H. J. Heinz Co., for merchandise	8.50
Adams Bros., for grain and b. meal	62.20
Thomas J. Briggs, for pans and dippers	5.57
L. B. Bodwell & Co., for coal	45.00
Manchester Slaughtering & Rendering Co., for dress- ing hogs	6.50
William G. Berry, for boiler insurance	40.00

C. H. Hutchinson, for crank	\$1.26
A. D. Maxwell estate, for wood and ice	60.14
National Biscuit Co., for crackers	7.74
United States Gutta-Percha Paint Co., for white lead	28.15
Houghton, Mifflin & Co., for school books	9.52
J. L. Hammett Co., for school books	5.45
Stearns Bros., for ice	15.00
Besse, Eldridge & Co., for shoes, etc	12.07
American Soap and Washoline Co., for soap	20.20
J. O. & L. P. Tremblay, for horseshoeing	1.75
William Marcotte & Co., for boy's hat . . . . .	.48
Singer Manufacturing Co., for machine repairs, etc.	8.31
D. A. Burnham, for tuning piano	2.50
A. L. Dodge, D. V. S., for services	8.00
D. H. Knowlton & Co., for books and stencils	1.63
Annis Flour & Grain Co., for groceries and grain	224.98
Daniels-Cornell Co., for groceries, etc.	94.29
Manchester Beef Co., for eggs and meat	55.06
J. W. Roberts & Co., for groceries	88.17
G. W. Dodge Shoe Co., for shoes	106.95
S. A. Montplaisir, for repairing, horseshoeing, etc.	96.73
Charles M. Floyd, for clothing	114.41
James W. Hill Co., for dry goods	68.10
Frank W. Fitts, for ladies' furnishings	6.29
Hardy & Folsom, for dry goods	12.29
E. M. Slayton Co., for beans and eggs	52.60
I. S. York, for harness repairing	2.95
Daniel Johnson, for sausage	7.21
F. H. Thurston, for drugs and medicines	41.71
Barton & Co., for dry goods	4.20
Henry W. Parker, for groceries	41.80
Union Electric Co., for lighting and power	105.00
George W. Bailey, for use of carriages, etc.	9.00
Manchester Provision Co., for lard and soap	35.20
C. A. Allen, for meats	6.22
Bucklin & Chamberlain, for repairing steam pump	15.27
Clarence H. Durgin, for meats	182.26
Charles A. Hoitt & Co., for mattresses and kitchen ware	31.75

W. P. Goodman, for stationery, papers, etc.	\$13.25
R. K. Horne, for kitchen ware	5.71
James A. Scully, for window shades, etc.	8.42
George H. Tanswell, for table linen and towels	8.16
F. Vorenberg & Co., for soap	2.55
Houghton & Dutton	7.42
E. R. Barry, for sundries	8.76
Arthur S. Brown, for grain and grinding corn	106.25
Nelson Morris & Co., for meats	38.79
Boston & Maine Railroad, for freight	2.57
New York Store, for dry and fancy goods	35.48
J. H. Wiggin & Co., for groceries, fish, meats, etc.	89.21
John B. Varick Co., for hardware	116.73
J. Hodge, for glass, and repairing doors	21.09
Frederick C. Small & Co., for groceries	88.66

\$2,618.54

Quarter ending June 30, 1902.

New England Telegraph and Telephone Co.	\$30.94
G. W. Shephardson, for ashes	20.50
L. Belli & Co.	11.95
John McSweeney, for horseshoeing	14.95
American Express Co., for manure	12.60
Houghton & Dutton, for spoons, forks, etc.	8.85
S. I. Sprague, for hens, etc.	20.00
New Hampshire Insurance Department, for telephoning, postage, etc.	10.00
Granite State Grocery Co., for Nutritone	13.00
Pike & Heald Co., for zinc	1.33
Platts Bros., for basins, bowls, etc.	1.92
The Malted Cereal Co., for gluten wheat	3.00
George H. Tanswell, for oil cloth, etc.	15.57
Charles E. Stearns, for 2 pigs	11.00
John S. Barnard, for strawberry plants	4.80
Boston & Maine Railroad, for freight	3.31
S. A. Montplaisir, for horseshoeing and repairing	38.18
A. P. Horne & Co., for apple trees and shrubs	12.25
A. Perley Fitch, for formaldehyde and sprinkler	6.00

J. H. Ramsey & Co., for apple trees . . .	\$6.25
W. W. Rawson & Co., for seeds and trees . . .	30.29
City of Manchester, for sewer pipe . . .	16.50
J. J. Holland, for disinfectant . . .	4.25
A. L. Dyer, for repairing shoes . . .	13.32
National Biscuit Co., for crackers . . .	4.60
Western Union Telegraph Co. . . .	1.61
Briggs, Seaver & Co., for groceries . . .	84.08
Frank D. Leighton, for iron pipe and valves . . .	32.84
Arthur S. Brown, for grain and grinding . . .	47.31
Porter Bros. & Co., for buttons, tapes, etc. . . .	16.20
Miss Judith Sherer, for board of patients . . .	165.05
Daniels-Cornell Co., for groceries . . .	224.00
George G. Thayer, for chairs . . .	12.25
W. B. Blake, for cotton cloth . . .	3.09
George W. Reed, for hacking for patients . . .	5.00
C. B. Perkins, for maple syrup . . .	5.00
Fred F. Fisher, for dentistry . . .	16.00
Ray Brook Gardens, for plants . . .	.80
Annis Flour & Grain Co., for groceries and grain . . .	622.56
A. C. Hovey, for kitchen ware . . .	2.29
Charles M. Floyd, for clothing . . .	73.03
R. K. Horne, for lamp chimneys . . .	.80
Besse, Eldridge & Co., for trunks and clothing . . .	19.50
Adams Bros., for grain . . .	35.34
J. J. Abbott, for paint and repairs . . .	29.34
Frederick C. Small & Co., for coffee and syrup . . .	65.75
F. E. Nelson, for sundries . . .	33.19
Hardy & Folsom, for dry goods . . .	25.55
James W. Hill Co., for dry goods . . .	54.01
John P. Squire & Co., for meats . . .	18.02
Fleischmann & Co., for yeast . . .	35.18
Alfred K. Hobbs, for sole leather, sheeting, etc. . . .	19.60
Manchester Beef Co., for meats, etc. . . .	19.95
Horace Marshall, for eggs . . .	10.80
W. P. Goodman, for papers and stationery . . .	8.05
W. P. Goodman, for books (Louise Penhallow fund) . . .	19.17
C. A. Allen, for meats . . .	7.98

Partridge Bros., for grain and salt	\$232.15
Holt & Trudel, for horseshoeing and repairing . .	28.61
Union Electric Co., for lighting and power . . .	105.00
C. H. Durgin, for meats	158.44
Barton & Co., for dry goods	38.69
I. S. York, for harness repairs	11.55
J. H. Wiggin & Co., for groceries, meats, fish, etc.	80.20
F. H. Thurston, for medicines	72.85
Thomas J. Briggs, for stove linings, etc. . . .	6.40
Singer Manufacturing Co., for needles	1.00
	<hr/>
	\$2,763.59

Quarter ending September 30, 1902.

John B. Varick Co., for hardware	\$271.59
Rogers, Perley & Ferguson, for flour and coffee .	44.00
Temple & Farrington Co., for books and stationery	24.73
F. J. Bixby, for plants	8.95
American Express Co., for manure	12.60
Nelson Morris & Co., for meats	70.40
Clark & Estey, for cotton and fancy goods . .	41.44
G. W. Dodge Shoe Co., for shoes	121.26
John B. Hall Co., for medicines	8.70
Manchester Hardware Co., for hardware and wheel-	
barrows	50.20
G. L. Stearns, for musical instruction and music .	38.50
Rice, Sayward & Whitten, for clothing	274.50
J. P. Brown, for use of ambulance and hacking .	20 00
A. A. Nourse, for instruction	1.00
Miville & Deschenes, for dress goods	7.15
George G. Thayer, for furniture	25.00
Judith Sherer, for wood at Oak Hill	10.00
A. S. Wait, for traveling expenses as trustee . .	14.64
E. M. Bryant & Co., for fuses	4.30
Manchester Water Works, for water	18.15
Elmer D. Goodwin, for burying John Flanders .	26.70
Emma T. McPartland, for nursing inmates at pest	
house	216.00
Manchester Postoffice, for stamps	10.00

J. L. Mitchell, for coal	\$66.78
Moore & Preston, for coal	18.00
Charles A. Hoitt & Co., for mattresses, furniture, etc.	22.65
George D. Towne, M. D., for consultation	15.00
Young Men's Christian Association, for speakers	25.00
William G. Berry, for insurance	101.76
Everett & Scott, for insurance	16.96
John A. Sheehan, for insurance	67.30
DeCourcy & Holland, for insurance	16.93
Clarence M. Edgerly, for insurance	33.93
Auburn Brush & Mop Co., for scrub brushes, etc.	10.85
American Soap & Washoline Co., for washoline	10.50
H. J. Heinz Co., for vinegar and chow-chow	18.00
R. D. Gay, for material and fancy yarns	5.43
John C. Linehan, for traveling expenses as trustee	35.00
Piper & McIntire, for music	6.43
Mitchell Wing & Co., for soap	6.50
Dr. H. D. W. Carvelle, for services	9.00
O. B. Greer, for cow and calf	45.00
Daniel C. Elliott, for raspberries	5.00
Grace Garland, for blueberries	2.60
C. A. Chamberlain, for steam pump repairs and find- ings	50.00
L. M. Scannell, for girls' hats	3.50
J. D. Lafond, for girls' hats	1.96
Mary V. Lee, for nursing inmates at pest house	86.50
E. G. Porter, for night clothing	1.50
Cobb-Eastman Co., for chairs	6.00
Orison Hardy, for shrubs and trees	5.90
Arthur Underhill, for berries and boraxine	3.60
National Biscuit Co., for crackers	7.20
Laport & Carpenter, for starch	12.44
R. H. White Co., for curtains and glass ware	5.17
Union Electric Co., for power and lighting	70.00
Kazanjian & Co., for rugs	18.50
E. M. Slayton Co., for eggs and produce	41.41
William Marcotte & Co., for caps, shirts, and cloth- ing	8.96

John Stack, for horseshoeing	\$11.22
Darwin A. Simons, for furniture, upholstering, etc.	40.30
Wheeler & Wilson Manufacturing Co., for sewing machine	30.00
Walter S. Heath, for shoes	7.45
Ray Brook Garden Co., for plants	3.05
Oliver Ditson Co., for music . . . . .	.83
Walter H. Baker & Co., for books . . . . .	.99
George C. Lord, for groceries	7.61
Woodley Soap Manufacturing Co., for soap	3.75
E. L. Gresley & Co., for chair	1.69
Richard Schwarz, for tether ball, games, etc.	9.65
John C. Haynes & Co., for harmonophones	1.20
William H. Elliott, for music . . . . .	.75
Boston & Maine Railroad, for freight	170.43
Patrick Cassidy, for labor	65.54
W. W. Rawson & Co., for seeds . . . . .	.80
New York Store Co., for dry goods	53.30
Head & Dowst Co., for brick and lumber	71.31
William E. Goodwin, for new closet and labor	12.88
A. L. Dyer, for shoe repairs	7.45
C. H. Durgin, for meats	88.26
William E Wells, for cow and calf	30.00
H. E. Branch, for instructing girls	34.00
B. F. Shepard, for repairing locks and keys	2.10
Annis Flour & Grain Co., for groceries and grain	692.92
Clark Bros., for hats	1.03
	<hr/>
	\$3,529.58

INCIDENTAL EXPENSES FROM OCTOBER 1, 1900,
TO SEPTEMBER 30, 1902, INCLUSIVE.

1900.

Oct.	1.	For express on school books	\$0.90
	5.	atlas . . . . .	.35
	19.	mileage book	20.00
	26.	expense getting Gibson	6.75
Nov.	1.	express on bundle . . . . .	.40

Dec. 10.	For music books for children .	\$2.02	
14.	"Ladies Home Journal" .	1.00	
21.	express on package . .	.15	
		<hr/>	\$31.57
1901.			
Jan. 23.	buttons	\$1.00	
	sharpening drills . . .	.25	
Feb. 13.	expenses to Concord . .	5.00	
	expenses to Lowell and Boston	5.00	
	Perry Mason & Co., for		
	"Youth's Companion" .	1.00	
Mar. 1.	expenses to Concord . .	3.25	
	"Rural New Yorker" . .	1.00	
8.	expenses to Laconia . .	3.58	
	expenses to Concord . .	3.00	
21.	boys' entertainment . .	3.00	
		<hr/>	\$26.08
May 20.	flag and express	\$2.15	
June 1.	expenses getting James May-		
	nard	7.80	
3.	expenses getting Howard and		
	Drew	11.59	
10.	electric car fares for children	2.50	
	express on plans . . . .	.25	
		<hr/>	\$24.29
July 17.	express	\$0.45	
	expenses getting E. King,		
	Bridgeport, Conn. . . .	17.55	
31.	machine needles . . . .	.50	
Aug. 8.	girls' picnic	6.10	
31.	electric car for boys . . .	2.60	
Sept. 13.	mileage book	20.00	
		<hr/>	\$47.20
Oct. 15.	express on packages . . .	\$0.55	
18.	expenses getting Charland .	13.05	
	girls' clothing	2.00	
	express on books . . . .	.95	
Nov. 6.	expenses to North Woodstock		
	and Wolfeborough . . .	10.00	

Nov.	12.	For expenses to Lowell	. . .	\$5.00	
Dec.	10.	ornamental trees	. . .	.50	
		horse medicine	. . .	.50	
		expenses to Hallowell, Port-			
		land, Me., and Boston	. . .	15.00	
	14.	F. E. Nelson, for pocket mir-			
		rors, 1 gross	. . .	1.20	
	16.	"Rural New Yorker"	. . .	1.00	
	17.	expenses to Franklin	. . .	3.25	
				<hr/>	\$53.00
	1902.				
Jan.	15.	boys' entertainment	. . .	\$2.50	
	20.	mileage book	. . .	20.00	
	31.	stamps	. . .	10.00	
		express on packages	. . .	.50	
Feb.	3.	expenses to Lowell	. . .	1.29	
Mar.	18.	express on packages	. . .	.85	
	24.	arresting James Sullivan	. . .	5.00	
	24.	stamps	. . .	5.00	
	31.	children's entertainment	. . .	2.00	
				<hr/>	\$47.14
Apr.	9.	stamps	. . .	\$10.00	
	11.	expenses to Lancaster and			
		Boston	. . .	8.55	
	19.	express on packages	. . .	1.30	
	22.	returning Charrette	. . .	5.00	
	25.	expenses to Boston	. . .	6.30	
		expenses to concert (boys and			
		girls)	. . .	2.05	
May	6.	express charges	. . .	.25	
		expenses to Nashua	. . .	1.15	
	7.	expense returning John Carter	. . .	12.75	
	13.	expenses to Boston	. . .	3.35	
	20.	expenses to Conference of Char-			
		ities and Corrections	. . .	90.00	
	21.	express charges	. . .	.95	
June	9.	electric car fares for girls to			
		church	. . .	1.50	
				<hr/>	\$143.15

July 22.	For children's pleasures . . .	\$2.00	
Aug. 4.	expenses to Fitzwilliam . . .	5.00	
	" Nashua . . .	3.25	
5.	children's entertainment . . .	2.50	
21.	expenses to Boston . . .	2.50	
27.	mileage book . . .	20.00	
Sept. 2.	expenses to Nashua . . .	1.78	
11.	" Boston . . .	2.75	
20.	" Lowell and Boston . . .	2.55	
			<hr/> \$42.33

CONDENSED FINANCIAL STATEMENT OF TREASURER, OCTOBER 1, 1900, to OCTOBER 1, 1901.

Cash in hands of treasurer October 1, 1900 . . . \$600.03

CASH RECEIVED.

From state treasurer, annual appropriation	\$6,000.00	
For board	11,958.01	
From Manchester Stocking Co.	4,030.80	
various sources	600.34	
interest J. McKean Wilkins fund	140.00	
" ex-Gov. Frederick Smyth fund	14.25	
" Louise Penhallow fund	30.79	
" Wilson note	40.00	
		<hr/> \$22,814.19
		<hr/> \$23,414.22

CASH PAID.

For salaries	\$5,959.66
incidental expenses	129.14
inmates' car fares	55.01
provisions	4,355.19
fuel	2,074.31
lighting and power	420.00
household supplies	646.50
clothing and shoes	1,624.84

For dry goods	\$853.39	
farm	2,094.00	
improvements	836.56	
repairs	1,306.05	
miscellaneous	1,620.15	
insurance	189.53	
Deposited in Hillsborough County Sav- ings Bank	40.00	
	<hr/>	\$22,204.33
Cash balance October 1, 1901		\$1,209.89

CONDENSED FINANCIAL STATEMENT OF TREAS- URER, OCTOBER 1, 1901, TO OCTOBER 1, 1902.

Cash in hands of treasurer October 1, 1901 . . . \$1,209.89

CASH RECEIVED.

From state treasurer, annual appropria- tion	\$6,000.00	
For board	11,706.45	
From Manchester Stocking Co	1,172.30	
various sources	772.73	
interest J. McKean Wilkins fund	140.00	
" ex-Gov. Frederick Smyth fund	66.75	
" Louise Penhallow fund	30.68	
" Wilson note	40.00	
Hall note	1,597.02	
Manchester Savings Bank	1,643.46	
Hillsborough County Savings Bank	501.45	
Merrimack River Savings Bank	1,213.63	
Guaranty Savings Bank, dividend	219.69	
	<hr/>	\$25,104.16
		<hr/>
		\$26,314.05

CASH PAID.

For salaries	\$6,246.85	
incidental expenses	285.62	
inmates' car fares	74.18	
provisions	4,540.50	
fuel	679.99	
lighting and power	385.00	
household supplies	456.81	
clothing and shoes	1,417.22	
dry goods	1,012.92	
farm	2,039.00	
repairs	789.25	
miscellaneous	1,671.36	
improvements	271.82	
insurance	276.88	
Deposited in Hillsborough Savings Bank	40.00	
For Riverside hosiery	5,955.56	
	<u> </u>	\$26,142.96
Cash balance October 1, 1902		\$171.09

SPECIAL STATE APPROPRIATION.

Balance from old appropriation	\$1,705.00	
1901.		
Oct. 14. Received from state treasurer,	\$3,800.00	
1902.		
Jan. 22. " " " "	3,000.00	
	<u> </u>	6,800.00
		<u> </u>
		\$8,505.00

EXPENDITURES.

1900.		
Nov. 26. Braman, Dow & Co., plan	\$250.00	
1901.		
July 22. C. H. Hutchinson, work and engine repairs	442.90	

Oct. 11.	Head & Dowst Co., labor and lumber	\$650.00
25.	C. Whittemore, mason work	43.20
	F. C. Darrah, gravel roof	83.75
Nov. 6.	C. H. Manning, inspection	20.00
	F. D. Leighton, steam heating	2,187.67
30.	J. H. Mendell & Co., steel ceiling	160.00
	J. H. Abbott, repairs	72.54
Dec. 11.	Head & Dowst Co., labor and lumber	398.77
	F. D. Leighton, standpipes	462.44
27.	F. D. Leighton, repairs	90.00
1902.		
Feb. 5.	W. H. Sullivan, painting, etc. . . .	117.46
Mar. 31.	S. A. Montplaisir, window grates	18.21
	Head & Dowst Co., lumber	184.13
	J. A. Chamberlin, maple trees	25.00
	J. B. Varick Co., paints, etc. . . .	96.75
	F. D. Leighton, smoke stack repairs	15.09
	A. L. Franks, electric	28.63
April 10.	Riverside hosiery, transferred	3,158.46
		<hr/> \$8,505.00

FINANCIAL CONDITION OF SCHOOL OCTOBER 1, 1902.

BILLS RECEIVABLE.

Cash balance	\$171.09	
For board	2,874.47	
interest due on funds	358.32	
From various sources	117.50	
	<hr/>	\$3,521.38
Bills payable		1,000.00
		<hr/>
Available balance		\$2,521.38

SPECIAL FUND REQUESTS.

James McKean Wilkins	\$8,000.00
Moody Kent	3,000.00
Louise Penhallow	1,000.00
Ex-Gov. Frederick Smyth	400.00
Ex-Gov. Frederick Smyth	2,000.00
	<hr/>
	\$14,400.00

Invested as follows :

James McKean Wilkins, Merrimack River Sav. Bank	\$6,224.15
James McKean Wilkins, C., B. & Q. R. R. bonds .	2,000.00
Moody Kent, Manchester Savings Bank	909.79
Moody Kent, Mechanics' Savings Bank	528.36
Moody Kent, Wilson note, secured	800.00
Moody Kent, Hillsborough County Savings Bank .	770.27
Louise Penhallow, Amoskeag Savings Bank . .	1,040.59
Ex-Gov. Fred'k Smyth, Merrimack River Sav. Bank	414.25
Ex-Gov. Fred'k Smyth, Merrimack River Sav. Bank	2,070.91
	<hr/>
	\$14,758.32

TOM W. ROBINSON,

Treasurer.

REPORT

OF THE

FISH AND GAME COMMISSIONERS

OF

NEW HAMPSHIRE

TO THE

GOVERNOR AND COUNCIL

DECEMBER, 1902.

VOLUME III - - - PART III.

CONCORD, NEW HAMPSHIRE.
1902.

PRINTED BY IRA C. EVANS CO., CONCORD.
BOUND BY RUMFORD PRINTING CO., CONCORD.

FISH AND GAME COMMISSIONERS' REPORT.

To His Excellency the Governor and Honorable Council :

The Commissioners of Fish and Game herewith submit their biennial report for the two years ending December 1, 1902.

From reports received from all sections of the state, we think we can safely say the fishing and hunting in New Hampshire has not been better in the last twenty years than in the past two seasons.

The brook trout fishing has been especially fine. Partridge, woodcock and quail have been very plenty.

It has not been uncommon for two hunters, in the last two seasons, to bring in a string of from ten to fifteen birds as the result of a day's hunt.

Ten years ago snaring was common in many parts of New Hampshire; to-day we seldom hear of a snare being set, although this fall we had the pleasure of breaking up one of the worst gangs of snarers in New Hampshire. One of the gang is serving a jail sentence, and the others are under suspended jail sentences during good behavior. These parties were sending their game to New York, where they were getting as high as \$1.25 each for partridge.

It is a fact beyond question that the law prohibiting the sale of game is doing much to help your commissioners to enforce the laws. By stopping the sale of partridge, and the practice of snaring, by regulating the length of the open season, and with New Hampshire's increasing area of sprout land and forest, this noblest of game birds (which has no peer in the country) will be spared indefinitely.

As a rule we are opposed to changing the fish and game laws, but we are of the opinion that it would be far better to have the open season commence October 1 on all kinds of game, rather than on September 15, as it does at the present time. On September 15 many of the partridge are not full grown, and some of the bevvies of quail no larger than sparrows.

Last winter the snow came so early that the partridge were driven to budding in November and December. They are then slaughtered by parties who drive round the wood-roads between sunset and dark, killing the birds from forest trees where they can do no possible harm.

If a law could be passed to prevent this killing of partridge while budding (we would say make the open season October, November and December), we would then have full grown birds that are able to take care of themselves, and when secured, of some account.

Three years ago we liberated fifty dozen quail. They were turned loose from the southern border, and as far north as Lake Winnepesaukee. It is impossible to reckon upon these birds living through some of our severe winters, but the last two winters have been remarkably favorable, and during the last fall excellent quail shooting has been had in many parts of New Hampshire.

We believe that for the amount of money expended in purchasing quail, no better results have been obtained from the same sum of money. We would advise that a sum be appropriated annually to stock our covers with quail.

The woodcock is virtually protected only from the time when it reaches us in the spring until the fifteenth of September. Our hunters commence killing them then, and continue until they start on their migration south. They are killed all the way on their flight south, and after they arrive there, all through the winter in many of the southern states. With the existing state of affairs, it is a question how long we will have this noble game bird with us.

We think no one can question that your commissioners are doing all in their power to enforce the fish and game laws of

New Hampshire. We should have fish and game detectives — three at least — who should be paid a living salary, to work with your commissioners.

Massachusetts is paying to-day more for the support of her fish and game wardens than New Hampshire is expending for its commission and all work of its commission.

We receive many favors and kind words from the press all over the state — from the *Manchester Union* especially. We take the liberty to copy from its editorial columns of October 13, 1902, the following :

“THE GAME LAWS.

“The fish and game commissioners are doing what they can for the enforcement of the game laws, and should receive the support and assistance of all good citizens. It is impracticable to frame any set of laws that will suit every one in all particulars. It is probable, however, that the present laws for the protection of game come as near meeting the approval of the majority of the citizens of the state as is possible. At all events, they are laws, and should be enforced. It is obvious to every one who thinks at all, that unless New Hampshire people are willing to witness the utter extinction of many species once abundant, there must be protection, and the laws designed for such protection must be rigidly enforced. Effective firearms were never so cheap as now, and the extension of electric roads has made it easy for any one to take a considerable journey into the country and return the same day. Of course, one citizen has the same right as another, but it is obvious that without rigidly enforced laws there would soon be no game, and, what is worse, there would be a great diminution in insect-eating birds, for many men and boys, when out with guns, feel little or no compunction at trying their skill on any living thing they see. It is necessary, therefore, if game and even song and insect-eating birds are to be preserved, that there should first be an intelligent public sentiment for their preservation, and next, that every law-abiding citizen should assist the fish and game commissioners and their representatives in every possible way. It is not a pleasant duty to make complaints, but it is a duty, nevertheless.”

By the advice of the present governor and council, we have been able to perfect the station at Colebrook, so that to-day we think we can safely say that this station has not a superior in New England as a state hatchery.

From this station we shall largely supply the state with fingerling and yearling brook trout. Two million eggs can be handled at this station. With a station similar to this located at Laconia, or somewhere in that section, where we can grow our lake trout and salmon to fingerlings or yearlings before they are planted, we can stock our lakes with far better success than we are having at the present time.

Although the lake trout fishing is excellent, and the salmon fishing is improving, especially in Lake Winnipiseogee, yet we question if your commission will ever be able to stock these waters sufficiently well to allow parties the privilege they have at the present time of killing these fish for the market. As a commission we are thoroughly opposed to the sale of lake trout, brook trout, and salmon. Never in the history of New Hampshire have so many summer homes been built near our lakes and ponds as in the last two years, and many of the owners are attracted here by the fishing in the waters near where they build. For this reason, if for no other, it is our duty to do all we can to keep these waters well stocked. At the present time most of our ponds are stocked with bass and pickerel. As we do not propagate these fish, the only way to keep up the supply is by regulating the open season. The bass and pickerel are able to care for themselves, and will increase if given a fair chance, but where a pond is covered with lines, as is done in ice-fishing for pickerel, the pickerel have got to go, for if they are all caught in the winter, they are not there to be caught in the summer. We think all ice-fishing should be stopped, except on the large lakes.

The deer in New Hampshire are rapidly increasing, so much so that it is frequently suggested to us that an open season be made all over the state, allowing one buck deer to a person. We often have complaints of damage done by deer. We have investigated frequently, and have as yet been unable to find where any serious damage has been done. But if the state expects to protect her deer, she should pay for damage done by them. With

the abandoned farms all over New Hampshire, and its rapidly increasing area of sprout land, southern New Hampshire would be an ideal deer country if it were not for the worthless dogs (with just enough hound in their make-up to make them sheep and deer dogs) which are allowed to run at large all through the close season, eating the eggs of all game birds, running down and killing the young of all kinds of our four-footed game, from the deer down to the rabbit. Many farmers in our state find it impossible to keep sheep to-day, owing to these worthless dogs. There should be some way to suppress this nuisance.

During the last two years we have lost by resignation and death two members of our board of commissioners. Mr. F. L. Hughes resigned on account of the increase of his business. He was a first class commissioner, and is honored and respected by all who know him.

In the death of Judge Shurtleff, New Hampshire lost one of the best fish and game commissioners that ever served her. With his knowledge of law (in fact, many of our most important fish and game laws on our statute books to-day were framed by him) and his extended knowledge of the forests and streams of our state, especially of northern New Hampshire, and with his vast acquaintance in every part of the state, he was an ideal man for a commissioner of fish and game. He was not only thoroughly acquainted with the different varieties of fish which our waters contain, but knew every animal and bird that inhabits our forests. He was an expert with the rifle and the shotgun, and we have yet to see his superior with the rod. He was a lovable, whole-souled man.

NATHANIEL WENTWORTH,
CHARLES B. CLARKE,
MERRILL SHURTLEFF,

Fish and Game Commissioners.

LIST OF FISH AND GAME COMMISSIONERS OF THE UNITED STATES AND CANADA.

U. S. COMMISSION OF FISH AND FISHERIES, WASHINGTON, D. C.

Commissioner, George M. Bowers.

Chief Clerk, Irving H. Dunlap.

Assistant in charge of Division of Inquiry, respecting food fishes, Hugh M. Smith, M. D.

Assistant in charge of Division of Fish Culture, John W. Titcomb.

Assistant in charge of Division of Statistics and Methods of the Fisheries, Charles H. Townsend.

Disbursing Agent, W. P. Titcomb.

ALASKA.

Hon. James M. Shoup, Juneau.

DOMINION OF CANADA.

A. T. Dunn, St. John, New Brunswick.

L. B. Knight, St. John, New Brunswick.

D. G. Smith, Chatham, New Brunswick.

Charles Barber, Winnipeg, Manitoba.

ARIZONA.

E. A. Sticker, Flagstaff.

W. L. Pinney, Phenix.

Jean Allison, Jerome.

CALIFORNIA.

H. W. Keller, Santa Monica.
 W. W. Van Arsdale, San Francisco.
 W. E. Gerber, Sacramento.
 Charles A. Vogelsang, "Chief Deputy," San Francisco.

COLORADO.

Charles W. Harris, Denver.
 T. J. Holland, Denver.

CONNECTICUT.

George T. Mathewson, Enfield.
 Robert G. Pike, Middletown.
 E. Hart Geer, Lyme.

DELAWARE.

J. Thomas Lowe, Little Creek.

FLORIDA.

John G. Ruge, Appalachicola.
 John Y. Detwiler, New Smyrna.

GEORGIA.

A. T. Dallis, La Grange.

IDAHO.

T. W. Bartley, Moscow.

ILLINOIS.

Nat H. Cohen, Urbana.
 S. P. Bartlett, Quincy.
 Adolph Gartz, Chicago.
 A. J. Lovejoy, Roscoe.

INDIANA.

Z. T. Sweeney, Columbus.

IOWA.

George A. Lincoln, Cedar Rapids.

KANSAS.

J. W. Hughey, Wellington.

MAINE.

L. T. Carleton, Winthrop.

Henry O. Stanley, Dixfield.

E. E. Ring, Orono.

MARYLAND.

John W. Avirett, Cumberland.

C. L. Vincent, Snow Hill.

Jessie W. Downey, Newmarket.

MASSACHUSETTS.

Joseph W. Collins, Boston.

Edward A. Brackett, Winchester.

John W. Delano, Marion.

MICHIGAN.

Freeman B. Dickerson, Detroit.

Charles D. Joslyn, Detroit.

George M. Brown, Saginaw.

Grant M. Morse, Portland.

MINNESOTA.

Uri L. Lamprey, St. Paul.

W. P. Hill, Fairmont.

D. W. Meeker, Moorhead.

H. G. Smith, Winona.

Sam. F. Fullerton, St. Paul.

MISSOURI.

Frank P. Yenawine, St. Joseph.
J. M. Shepler, Milan.
Richard Porter, Paris.
George J. Champman, St. Louis.
J. H. Zollinger, Boonville.
A. J. D. Burford, Burfordsville.

MONTANA.

W. F. Scott, Helena.

NEBRASKA.

Ezra P. Savage, Lincoln.
George B. Simpkins, Lincoln.
W. J. O'Brien, South Bend.
George L. Carter, North Platte.

NEW HAMPSHIRE.

Nathaniel Wentworth, Hudson Center.
Charles B. Clarke, Concord.
Merrill Shurtleff, Lancaster.

NEW JERSEY.

William A. Halsey, Newark.
Benjamin P. Morris, Long Branch.
Richard T. Miller, Camden.

NEW YORK.

Timothy L. Woodruff, Brooklyn.
D. C. Middleton, Watertown.
Charles H. Babcock, Rochester.

NORTH CAROLINA.

S. L. Patterson, Raleigh.
T. K. Bruner, Raleigh.
B. W. Kilgore, Raleigh.
H. H. Brimley, Raleigh.

OHIO.

J. L. Rodgers, Columbus.
Paul North, Cleveland.
Duff W. Greene, Dayton.
Thomas B. Baxton, Cincinnati.
Edwin M. Kennedy, McConnelsville.
Geo. C. Blankner, Columbus.
J. C. Porterfield, Columbus.

OKLAHOMA TERRITORY.

J. A. Gould, El Reno.

OREGON.

T. T. Geer, Salem.
F. I. Dunbar, Salem.
Charles S. Moore, Salem.
H. G. Van Dusen, Astoria.
H. A. Webster, Clackamas.
L. P. W. Quimby, Portland.

PENNSYLVANIA.

Fish Commissioners.

S. B. Stillwell, Scranton.
John Hamberger, Erie.
Henry C. Demuth, Lancaster.
James W. Correll, Easton.
William E. Meehan, Philadelphia.
Henry C. Cox, Wellsboro.

Game Commissioners.

Colman K. Sober, Lewisburg.
William M. Kennedy, Allegheny.
Charles B. Penrose, Philadelphia.
J. O. H. Denny, Ligonier.
James H. Worden, Harrisburg.
William Heywood Myers, Williamsport.

RHODE ISLAND.

Fish Commissioners.

Henry T. Root, Providence.
William P. Morton, Johnston.
J. M. K. Southwick, Newport.
Charles W. Willard, Westerly.
Adelbert Roberts, Woonsocket.
Albert David Mead, Providence.
William H. Boardman, Central Falls.

Game Commissioners.

Fenver H. Peckham, Jr., Providence.
Walter R. Stiness, Warwick.
Edwin R. Lewis, Westerly.
William H. Thayer, Bristol.
Alexander O'D. Taylor, Newport.
John H. Flanagan, Secretary, Providence.

TEXAS.

J. P. Kibbe, Port Lavaca.

UTAH.

John Sharp, Salt Lake City.

VERMONT.

Henry G. Thomas, Stowe.
Edward A. Davis, Bethel.
Charles C. Gilmore, Swanton.

VIRGINIA.

John W. Boudoin, Bloxom.
George B. Keezell, Keezleton.
Henry M. Tyler, Richmond.
Robert J. Camp, Franklin.
Seth F. Miller, Riverside.

WASHINGTON.

Timothy Kershaw, Whatcom.

WEST VIRGINIA.

E. F. Smith, Hinton.

WISCONSIN.

Edwin E. Bryant, Madison.

E. A. Birge, Madison.

Calvert Spensley, Mineral Point.

James J. Hogan, La Crosse.

Henry D. Smith, Appleton.

Currie G. Bell, Bayfield.

William J. Starr, Eau Claire.

James Nevin, Madison.

WYOMING.

D. C. Nowlin, Big Piney.

DISTRIBUTION OF FRY.

1901.

U. S. STATION, NASHUA — BROOK TROUT.

Applicant.	Number.	Town.
C. N. Smith . .	10,000 . . .	Grafton
Charles S. Sheldon . .	10,000 . . .	Hancock
C. W. Whitney . .	10,000 . . .	Troy
Frank C. Farwell . .	10,000 . . .	East Harrisville
A. Beard . . .	10,000 . . .	Wilton
C. A. Jacquith . .	20,000 . . .	Peterboro
C. J. O'Neal . . .	10,000 . . .	Walpole
C. W. Safford . .	10,000 . . .	Hinsdale
Charles Hartwell . .	10,000 . . .	Keene
Dr. H. R. Beals . .	10,000 . . .	Keene
Dr. H. S. Hutchinson . .	10,000 . . .	Milford
W. H. Beasom . . .	20,000 . . .	Nashua
Charles B. Clarke . .	40,000 . . .	Concord

PLYMOUTH STATION — BROOK TROUT.

M. A. Hall . . .	15,000 . . .	Sandwich
Albert L. Davis . .	10,000 . . .	Wentworth
E. C. Rowe . . .	10,000 . . .	No. Haverhill
W. W. Colburn . .	10,000 . . .	No. Haverhill
George H. L. Head . .	10,000 . . .	Warren
E. B. Pike . . .	10,000 . . .	Pike Station
Carrie Elliott . . .	20,000 . . .	Waterville
Moody Howland . .	10,000 . . .	No. Woodstock
Hall's ponds . . .	30,000 . . .	Sandwich

NEWFOUND LAKE STATION — BROOK TROUT.

W. B. Richardson	.	15,000	.	.	.	Canaan
Hale Chadwick	.	10,000	.	.	.	Penacook
C. C. Cooper	.	15,000	.	.	.	Lebanon
E. S. Little	.	10,000	.	.	.	Hill
M. G. Colland	.	10,000	.	.	.	Enfield
A. B. French	.	10,000	.	.	.	East Andover
M. C. Camp	.	10,000	.	.	.	Hanover
John Goold	.	10,000	.	.	.	West Lebanon
C. Whitmarsh	.	10,000	.	.	.	Nashua
Emiel Clark	.	10,000	.	.	.	Nashua
F. D. Currier	.	10,000	.	.	.	Canaan
F. W. Barney	.	15,000	.	.	.	Grafton
Isaac Downs	.	10,000	.	.	.	Andover
W. B. Sulloway	.	15,000	.	.	.	Grafton
C. G. Rowell	.	10,000	.	.	.	Franklin
John Brown	.	10,000	.	.	.	Canaan
Hatchery brook	.	5,000	.	.	.	Bridgewater
Dick Brown brook	.	10,000	.	.	.	Bridgewater
Pike's brook	.	5,000	.	.	.	Bridgewater
Atwood brook	.	5,000	.	.	.	Bridgewater
Woodman brook	.	5,000	.	.	.	Bridgewater

COLEBROOK STATION — BROOK TROUT.

Whitefield	.	.	.	15,000
Alder brook	.	.	.	5,000
Littleton	.	.	.	20,000
Lisbon	.	.	.	10,000
Landaff	.	.	.	5,000
Bath	.	.	.	10,000
Woodsville	.	.	.	5,000
Lancaster	.	.	.	20,000
Dalton	.	.	.	5,000
Franconia	.	.	.	20,000
Bethlehem	.	.	.	10,000
Wing road	.	.	.	2,500

Warren . . .	15,000
Jefferson . . .	20,000
Twin Mountain . . .	10,000
Fabyan's . . .	10,000
Mt. Pleasant . . .	5,000
Bartlett . . .	10,000
Jackson . . .	20,000
Conway . . .	10,000
Stratford . . .	10,000
Groveton . . .	15,000
Berlin . . .	20,000
Gorham . . .	15,000
Shelburne . . .	5,000
Randolph . . .	5,000
Millsfield . . .	10,000
Diamond ponds . . .	60,000
Greno pond . . .	25,000
Errol . . .	5,000
Millsfield . . .	5,000
Colebrook . . .	20,000
Ladd pond . . .	5,000
Columbia . . .	12,000
Big Millsfield pond . . .	10,000
Balsoms pond . . .	200,000
Hatchery . . .	10,000

CONWAY STATION — BROOK TROUT.

Madison . . .	25,000
Conway . . .	25,000
Albany . . .	20,000
Tamworth . . .	10,000
Freedom . . .	10,000
Eaton . . .	10,000

LACONIA STATION—BROOK TROUT.

Arthur E. Clarke	.	10,000	.	.	Manchester
F. G. Horn	.	10,000	.	.	Milton
Frank B. Clark	.	10,000	.	.	Dover
A. C. Reeves	.	10,000	.	.	Epsom
F. H. Thurston	.	30,000	.	.	Manchester
N. H. Perley	.	10,000	.	.	Goffstown
C. O. Junkins	.	10,000	.	.	Belmont
P. A. Brown	.	10,000	.	.	Sanbornville
F. C. Robinson	.	10,000	.	.	Tilton
Frank A. Chester	.	10,000	.	.	Dover
F. D. Osgood	.	10,000	.	.	Pittsfield
Robert Lamprey	.	5,000	.	.	Tuftonborough
Rillam Jones	.	10,000	.	.	Tuftonborough
William A. Gilman	.	10,000	.	.	Wentworth
Charles F. Piper	.	15,000	.	.	Wolfeborough
A. W. Farrow	.	10,000	.	.	West Derry

LACONIA STATION—LAKE TROUT.

W. P. S. Sanderson	.	5,000	.	.	Gilmanton
J. W. Demerrett	.	10,000	.	.	Lee Depot
F. H. Thurston	.	20,000	.	.	Manchester
F. L. Piper	.	10,000	.	.	Holderness
Elmer E. Moulton	.	10,000	.	.	Freedom
A. W. Farrow	.	10,000	.	.	West Derry
F. D. Osgood	.	10,000	.	.	Center Barnstead
Winnepesaukee lake	.	362,000			
Winnesquam lake	.	270,000			

PLYMOUTH STATION—LAKE TROUT.

E. B. Pike	.	10,000	.	.	Pike Station
Loon lake	.	10,000			

NEWFOUND LAKE STATION—LAKE TROUT.

A. B. French	.	10,000	.	.	East Andover
F. D. Currier	.	10,000	.	.	Canaan
Isaac Down	.	10,000	.	.	Andover
Newfound lake	.	427,000			

NEWFOUND LAKE STATION — LAND-LOCKED SALMON FRY.

A. B. French	.	.	5,000	.	.	East Andover
Cockermouth river	.	.	10,000	.	.	Hebron
Fowler river	.	.	12,000	.	.	Alexandria
Tilton brook	.	.	5,000			

CONWAY STATION — LAND-LOCKED SALMON FRY.

Silverlake	.	.	.	10,000
------------	---	---	---	--------

PLYMOUTH STATION — LAND-LOCKED SALMON FRY.

E. B. Pike	.	.	10,000	.	.	Pike Station
------------	---	---	--------	---	---	--------------

COLEBROOK STATION — LAND-LOCKED SALMON FRY.

Greno pond	.	.	8,000
Conneticut lakes	.	.	17,000

LACONIA STATION — LAND-LOCKED SALMON FRY.

Theodore Thompson	.	.	10,000	.	.	Tuftonborough
Robert Lamphrey	.	.	10,000	.	.	Tuftonborough
Harris Gilbert	.	.	10,000	.	.	Lyme
F. H. Thurston	.	.	10,000	.	.	Manchester
Poor Farm brook	.	.	25,000			
Gilford brook	.	.	25,000			
Durkee brook	.	.	25,000			
Ice ponds	.	.	10,000			
Black brook	.	.	10,000			

LACONIA STATION — WHITEFISH FRY.

Winnesquam Lake	.	.	150,000
-----------------	---	---	---------

COLEBROOK STATION — WHITEFISH FRY.

Lancaster	.	.	.	20,000
Littleton	.	.	.	20,000
Connecticut lakes	.	.	.	80,000

COLEBROOK STATION — BROWN TROUT.

Greno ponds	.	.	.	5,000
Hatchery	.	.	.	5,000

DISTRIBUTION OF FRY AND FINGERLINGS.

1902.

U. S. STATION — NASHUA.

30,000 brook trout fry	.	.	.	.	.	Colebrook
30,000 lake trout fry	.	.	.	.	.	Newfound lake, Bristol
5,000 rainbow trout fry	.	.	.	.	.	Colebrook
3,000 rainbow trout fry	.	.	.	.	.	Webster lake, Franklin
1,000,000 pike perch fry	.	.	.	.	.	Lake Massabesic, Manchester
1,400 land-locked salmon fingerlings,	.	.	.	.	.	Pleasant pond, New London

PLYMOUTH STATION — BROOK TROUT.

George H. Fowler	.	20,000	.	.	.	Bristol
S. S. Jewett, Sec'y	.	30,000	.	.	.	Laconia
Elmer D. Moulton	.	10,000	.	.	.	Ossipee
Sandwich ponds	.	50,000	.	.	.	Sandwich
Frank L. Hughes	.	30,000	.	.	.	Campton
Elmer Clement	.	10,000	.	.	.	Hudson
		80,000	.	.	.	Nashua, Wilton and Hudson.
		10,000	.	.	.	Pelham
		20,000	.	.	.	Windham
		10,000	.	.	.	Salem

BRISTOL STATION — BROOK TROUT.

W. B. Richardson	.	10,000	.	.	.	Canaan
John Brown	.	10,000	.	.	.	Dorchester
George H. Gordon	.	10,000	.	.	.	Wilmot
John Goold	.	10,000	.	.	.	West Lebanon
C. C. Cooper	.	10,000	.	.	.	West Lebanon

Roscoe J. Gray . .	5,000	. . .	Plainfield
George H. Fowler . .	15,000	. . .	Bristol
Frank W. Calley . .	15,000	. . .	Bristol
E. H. Carroll . .	10,000	. . .	Warner
E. C. Currier . .	10,000	. . .	Salisbury
Joel Gillingham . .	15,000	. . .	Bradford
Samuel Lewis . .	10,000	. . .	Newport
C. G. Rowell, Sec'y .	20,000	. . .	Franklin
John Hopkins . .	10,000	. . .	Potter Place
E. A. Perkins . .	10,000	. . .	Andover
J. E. Shepard . .	5,000	. . .	Wilmot
E. A. Smith . .	5,000	. . .	Wilmot
W. B. Sulloway . .	30,000	. . .	Grafton

LACONIA STATION — BROOK TROUT.

S. S. Jewett, Sec'y .	30,000	. . .	Laconia
S. M. Pearson . .	5,000	. . .	Stratham
J. W. Farrow . .	5,000	. . .	East Derry
P. A. Brown . .	15,000	. . .	Sanbornville
J. Y. Webster . .	20,000	. . .	Sandwich
W. H. Gilman . .	15,000	. . .	Wentworth
A. L. Davis . .	10,000	. . .	Wentworth
George H. C. Head .	20,000	. . .	Warren
E. B. Pike, Sec'y .	20,000	. . .	Pike Station
W. H. Thompson .	20,000	Pembroke and	Allenstown
A. L. Ricker . .	10,000	. . .	Short Falls
A. C. Reeves . .	5,000	. . .	Epsom
Frank D. Osgood .	10,000	. . .	Pittsfield
F. S. Eaton . .	10,000	. . .	Barnstead
Hillsboro' County Fish and Game League .	60,000	. . .	Manchester
S. M. Leach . .	5,000	. . .	Goffstown
	5,000	. . .	Contoocook
J. Arthur Jones . .	5,000	. . .	West Hopkinton
	10,000	. . .	Antrim
	5,000	. . .	Bennington
	10,000	. . .	Peterborough

CONWAY STATION — BROOK TROUT.

10,000	.	.	.	Madison
10,000	.	.	.	Albany
10,000	.	.	.	Conway
10,000	.	.	.	Eaton
10,000	.	.	.	Ossipee
10,000	.	.	.	Tamworth
10,000	.	.	.	Sanbornville

FARMINGTON STATION — BROOK TROUT.

Charles S. Barker	.	20,000	.	.	.	Rochester
Daniel Hayes brook	.	10,000	.	.	.	New Durham
Beaver brook	.	15,000				
Jones' brook	.	10,000	.	.	.	Middleton
Minnow brook	.	5,000	.	.	.	Middleton
Stevens' brook	.	5,000	.	.	.	Middleton
Horn brook	.	5,000	.	.	.	Farmington
Whitehouse brook	.	5,000	.	.	.	Farmington
Moonshine brook	.	5,000	.	.	.	Farmington
Monter brook	.	5,000	.	.	.	Farmington

COLEBROOK STATION — BROOK TROUT.

A. L. Fabyan	.	30,000	.	.	.	Lancaster
Harry Shurtleff	.	15,000	.	.	.	Whitefield
Tom Fletcher	.	5,000	.	.	.	Alder brook
Renfrew Bros.	.	20,000	.	.	.	Littleton
George Morris	.	15,000	.	.	.	Lisbon
J. L. Bedell	.	10,000	.	.	.	Bath
Dexter D. Dow	.	10,000	.	.	.	Woodsville
Taylor Wingate	.	10,000	.	.	.	Haverhill
C. E. Dagon	.	10,000	.	.	.	Gale river
F. G. McElefs	.	10,000	.	.	.	Groveton
		5,000	.	.	.	Groveton
Governor Jordan	.	20,000	.	.	.	West Milan
Howard Wight	.	20,000	.	.	.	Berlin
Fred W. Noise	.	10,000	.	.	.	Gorham

Fred W. Noise . . .	5,000	. . .	Randolph
C. E. Philbrook . . .	5,000	. . .	Shelburne
F. N. Wheeler . . .	5,000	. . .	Berlin
M. Perkins . . .	10,000	. . .	Jefferson
George W. Lane . . .	5,000	. . .	Fabyan's
John Page . . .	5,000	. . .	Mt. Pleasant
George W. Lane . . .	5,000	. . .	Crawfords
G. L. Knight . . .	5,000	. . .	Upper Bartlett
W. Pitman . . .	5,000	. . .	Lower Bartlett
Trickey Bros. . . .	15,000	. . .	Jackson
Mr. Coleman . . .	25,000	. . .	Diamond ponds
George Demeritt . . .	25,000	. . .	Greno pond
A. C. Wallace . . .	5,000	. . .	Colebrook
A. C. Wallace . . .	5,000	. . .	Columbia

COLEBROOK STATION — BROOK TROUT FINGERLINGS.

	10,000	. . .	Fabyan's
	10,000	. . .	Mt. Pleasant
	10,000	. . .	Crawford
Edgar Stone . . .	1,000	. . .	Bartlett
Trickey Bros. . . .	1,000	. . .	Jackson
Jake Welch . . .	1,000	. . .	Groveton
Frank McElops . . .	1,000	. . .	Groveton
Ed Tibbetts . . .	2,000	. . .	Groveton
Fred Wheeler . . .	1,000	. . .	Berlin
Howard Wight . . .	2,000	. . .	Berlin
George Clark . . .	1,000	. . .	Gorham
Fred Noise . . .	1,000	. . .	Gorham
Charles Lowe . . .	1,000	. . .	Gorham
Mr. Coleman . . .	10,000	. . .	Stewartstown
Harry E. Houston . . .	20,000	. . .	Stewartstown
George Demeritt . . .	5,000	. . .	Errol
Merrimack County Fish and Game League . . .	6,000	. . .	Concord
G. W. Woodbury . . .	8,000	. . .	Newport
Henry S. Hale . . .	100,000	. . .	Dixville

COLEBROOK STATION — RAINBOW TROUT.

25,000	.	.	Connecticut lake
3,000	.	.	Groton pond

BRISTOL STATION — LAND-LOCKED SALMON.

Hebron river	.	.	12,000	.	.	.	Hebron
Groton river	.	.	13,000	.	.	.	Groton

BRISTOL STATION — LAKE TROUT.

Newfound lake	.	.	475,000	.	.	.	Bristol
Fleer & Dolloff	.	.	1,000	.	.	.	Bristol
John Hopkins	.	.	10,000	.	.	.	Potter Place
Leon D. Hurd	.	.	10,000	.	.	.	Elbow pond

LACONIA STATION — LAND-LOCKED SALMON.

Harris Gilbert	.	.	10,000	.	.	.	Lyme
F. H. Thurston	.	.	10,000	.	.	.	Manchester
E. B. Pike, Sec'y	.	.	10,000	.	.	.	Pike Station
Spofford Lake Fish and Game League	.	.	5,000	.	.	.	Chesterfield
Tributaries to Lake Win- nipesaukee	.	.	25,000				
Tributaries to Lake Win- nisquam	.	.	25,000				

LACONIA STATION — LAKE TROUT.

George H. C. Head	.	.	10,000	.	.	.	Warren
A. W. Farrow	.	.	10,000	.	.	.	Derry
F. H. Thurston	.	.	20,000	.	.	.	Manchester
E. B. Pike, Sec'y	.	.	20,000	.	.	.	Pike Station
Thomas P. Johnson, Sec'y	.	.	20,000	.	.	.	Keene

FARMINGTON STATION — LAKE TROUT.

Charles S. Barker	.	.	10,000	.	.	Bow lake, Stratford
			12,000	.	.	Merrymeeting pond

WATERS THAT ARE CLOSED AGAINST WINTER FISHING.

Gorham pond in the town of Dunbarton, five years from October 25, 1898.

Ayer's pond in the town of Hudson, five years from December 1, 1898.

Reed's pond in the town of Merrimack, five years from December 1, 1898.

Sanborn's pond in the town of Loudon, five years from February 3, 1899.

Conway lake, or Walker pond, in the towns of Conway and Eaton, five years from February 3, 1899.

Sandogardy pond in the town of Northfield, five years from March 11, 1899.

Deering reservoir in the town of Deering, five years from March 14, 1899.

Robinson's pond in the town of Hudson, five years from March 14, 1899.

Otter lake in the town of Greenfield, five years from March 26, 1899.

Babboosic lake in the towns of Amherst and Merrimack, five years from March 26, 1899.

Ashuelot pond in the town of Washington, five years from March 28, 1899.

Long, Rocky and Flint ponds in the town of Hollis, five years from April 4, 1899.

Spectacle, Rocky Bound, and Long ponds in the town of Croydon, five years from November 6, 1899.

Big and Little Deerfield ponds in the town of Candia, five years from December 29, 1899.

Crystal lake in the town of Enfield, five years from March 11, 1899.

Ayer's pond in the town of Barrington, five years from January 18, 1900.

Lake Warren in the town of Alstead, five years from January 20, 1900.

Stocker, Butternut, Anderson's, Eastman, and Miller's ponds in the town of Grantham, five years from February 6, 1900.

Lyme or Post pond in the town of Lyme, four years from February 4, 1901.

All ponds in the town of Kingston, five years from December 30, 1901.

All ponds in the town of Sutton, Bradford, Newbury, except Sunapee lake, five years from February 22, 1902.

All ponds in the towns of Sandown and Windham, Policy pond in the towns of Windham and Salem, Cub pond in the towns of Sandown and Danville, Angle pond in the towns of Sandown and Hampstead, five years from February 22, 1902.

All ponds in the towns of Hillsborough and Newton, Plaistow, Danville, Hampstead, Salem, Atkinson, Derry, Brookline, and Franchestown, five years from February 24, 1902.

Suncook pond in the town of Northwood, Kelly pond in the town of New Hampton, Trury pond in the town of Bow, Webster lake in Franklin, the waters, bays, or basins supplied by the Winnepesaukee river, between dam and East Tilton and Tilton and Belmont railroad bridge over said river, five years from February 24, 1902.

Newfound lake in the towns of Bristol, Bridgewater, Hebron, and Alexandria is closed against ice-fishing for land-locked salmon, also against ice-fishing for lake trout, except from January 1 to February 1, both days inclusive.

Highland lake in the town of Andover, five years from February 25, 1902.

Nut's pond in Manchester, five years from May 30, 1902.

Pleasant pond in the town of Deerfield, five years from December 10, 1902.

All ponds in the town of Hancock, five years from December 10, 1902.

Indian pond in the towns of Piermont and Orford, five years from December 10, 1902.

Demerriitt's, Keniston and North River ponds, in the town of Nottingham, five years from December 10, 1902.

All ponds in the town of Henniker, five years from December 10, 1902.

Tuckee pond in the town of Salisbury, five years from December 10, 1902.

Bagley pond in the town of Warner, five years from December 10, 1902.

All ponds in the town of Pelham, five years from December 10, 1902.

Bow lake in the towns of Strafford and Northwood, five years from December 10, 1902.

Chestnut pond in the towns of Pittsfield and Epsom, five years from December 10, 1902.

Wild Goose and Shaw's ponds in the towns of Pittsfield and Barnstead, five years from December 10, 1902.

Berry, Eaton and Blake ponds in the town of Pittsfield, five years from December 10, 1902.

Breed pond in the towns of Harrisville and Nelson, five years from December 10, 1902.

Mascoma lake in the towns of Enfield and Lebanon, five years from December 10, 1902.

Spectacle pond in the towns of Enfield and Grafton, five years from December 10, 1902.

Hait's pond in Canaan, five years from December 10, 1902.

Baptist, Chalk, Morgan and Star ponds in the town of Springfield, five years from December 10, 1902.

Goose pond in the towns of Canaan and Hanover, five years from December 10, 1902.

Turtle pond in Concord, five years from December 10, 1902.

Big and little Turkey ponds in Concord and Bow, five years from December 10, 1902.

Long pond in the town of Webster, five years from December 10, 1902.

Otter pond in the towns of Sunapee and New London, five years from December 10, 1902.

The following ponds were closed by the legislature :

Massabesic lake in Auburn and Manchester, Mascoma lake in Enfield and Lebanon, Spectacle pond in Enfield and Grafton, Hart's pond in Canaan, Goose pond in Canaan and Hanover, Otternic pond in the town of Hudson, four years from March 25, 1899.

LIST OF LAKES AND PONDS.

LIST OF LAKES AND PONDS.

LIST OF LAKES AND PONDS IN NEW HAMPSHIRE, EXCLUSIVE OF THE GREAT LAKES, WINNIPESAUKEE, SUNAPEE, OSSIPEE, CONNECTICUT, ETC., WITH THE SIZE, CHARACTER OF THE BOTTOM, AND SPECIES OF FISH FOUND IN THEM.

[Words in *Italics* designate kinds put in ponds by the commissioners.]

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Acworth...	Cold.....	40	Rocky...	<i>Bass</i> (1877), perch, pickerel, pouts, etc.
Alstead.....	Caldwell.....	234	Various.....	<i>Perch</i> , pickerel, pouts, etc.
"	Warren's.....			<i>Bass</i> (1877).
Alton.....	Half-Moon.....	320		
"	Woodman's.....			
"	Hill's.....			
"	Place's.....			
Amherst.....	Babboosic.....	300	Various.....	<i>Bass</i> (1873), pickerel, perch.
"	Little.....	2	Muddy.....	Pickerel.
"	Daimon.....	10	Muddy.....	Pickerel, pouts.
Andover.....	Bradley.....	100	Muddy.....	Pickerel, perch.
"	Highland Lake..	400	Various.....	<i>Bass</i> , pickerel, perch, pouts.
"	Horseshoe and Andover.....	100	Muddy.....	Pickerel, perch, pouts.
"	Elbow.....	300	Hard.....	Pick'l, perch, pouts.
"	Cold.....	20	Muddy.....	Trout.
Antrim.....	Gregg.....	100	Various.....	<i>Bass</i> (1873).
"	Dudley.....	31	Rocky.....	Perch, pouts.
"	Tilton.....	10	Muddy.....	Pouts, eels.
Auburn.....	Massabesic.....	2500	Various.....	<i>Bass</i> (1868), pickerel, perch.
Albany.....	Chocorua.....			
"	Whitten's.....			
Alexandria..	Foster.....			
"	Goose.....			
Allenstown..	Bear Hill.....	15	Mud and sand...	Pickerel, perch.
Barnstead..	Huntress.....			
"	Brindle.....			
"	Suncook.....			<i>Bass</i> (1877).
"	Brandy.....			
Barrington..	Ayer's.....			<i>Bass</i> (1877).
"	Long.....			
"	Round.....			
"	Nippo.....			
"	Mendum's.....			<i>Bass</i> (1877).
"	Swain's.....			
"	Bodge's.....			
Bath.....	Muddy.....	30	Muddy.....	Pickerel, perch.
Belmont.....	Pout.....	15	Various.....	Pouts.
Benton.....	Beaver Meadow..			Trout.

LIST OF LAKES AND PONDS.— *Continued.*

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Berlin.....	Head.....			
Bow.....	Truree.....	50	Mud and moss...	Pickereel, perch, pouts, eels.
Boscawen.....	Long.....	300	Rocky and sandy	Pick'l, perch, pouts.
Boyce's.....	Boyce's.....	10	Muddy.....	Pick'l, perch, pouts.
Bradford.....	Bradford.....	275	Rocky and sandy	Bass (1873), lake trout (1876), l. l. salmon (1876), pickerel.
".....	Todd's.....	200	Muddy.....	Pickereel, perch, pouts, eels.
Brookfield.....	Cook's.....	350	Rocky.....	Blue-backed trout, California salmon.
".....	Mill.....			
Brookline.....	Potanius.....	600	Mud and sand...	Pickereel, perch, etc.
".....	Peasley.....	150	Mud and sand...	Pickereel, perch, etc.
Canaan.....	Heart.....	1200	Sandy.....	Bass (1874), pickerel.
".....	Goose.....	1000	Muddy.....	Pout, pickerel, bass (1877).
".....	Clark.....	700	Muddy.....	Pout, pickerel.
".....	Mud.....	40	Muddy.....	Pout, pickerel.
".....	Ford's.....	50	Chalky.....	Trout.
Campton.....	Avery's.....	100	Sand and mud...	Pick'l, perch, trout.
".....	Yeaton.....	5	Muddy.....	Pickereel, perch.
Canterbury.....	Clough's.....	30	Sandy.....	Bass (1871), pickerel, barbel, pouts.
".....	Shaker (5).....	60		Pick'l, perch, pouts.
".....	Crane-Neck.....	8	Muddy.....	Pick'l, perch, pouts.
".....	Forest.....	20	Muddy.....	Pick'l, perch, pouts.
".....	Morrill.....	20	Sandy.....	Pick'l, perch, pouts.
".....	Reservoir.....	35	Muddy.....	Pickereel, eels, perch, pouts.
Center Harbor..	Long.....			
".....	Bear.....			
".....	Hawkins.....			
".....	Otter.....			
Chatham.....	Kimball's.....	100	Sand and mud...	Pickereel.
".....	Mountain.....	100	Sandy, rocky...	Trout.
".....	Province.....	10	Sandy, rocky...	Trout.
Chesterfield...	Spofoff's.....	1500	White sand...	Bass, pike, pickerel.
".....	Lily.....	30	Muddy.....	Pouts.
".....	Indian.....	20	Muddy.....	Pouts.
Chichester.....	Pinkfield.....			[nally trout.
Clarksville.....	Clarksville.....	200		Pick'l, pouts, origi-
".....	Carr.....	30		
Columbia.....	Lime.....	30	Lime.....	No fish.
".....	Fish.....	50	Muddy.....	Trout, eels.
Concord.....	Penacook Lake..	340	Sandy, rocky...	Salmon, lake trout, perch, bass.
".....	Turtle.....			
".....	Turkey.....	20	Muddy.....	Perch.
".....	Little.....			
Conway.....	Walker's.....	2560	Rocky.....	Pickereel, perch, pouts, eels.
".....	Pequawket.....	640	Muddy.....	Pickereel, perch, pouts, eels.
Croydon.....	Long.....			Smelt (1877).
".....	Rocky-Bound.....			Bass ('70), smelt ('77).
".....	Governor's.....			Bass (1876).
".....	Spectacle.....			
Danbury.....	Bog.....			
".....	School.....			
Danville.....	Long.....			
".....	Cub.....	100	Muddy.....	Pick'l, perch, pouts.
Deerfield.....	Pleasant.....	1100	Sandy.....	Pick'l, bass, perch.
".....	Moulton's.....			

LIST OF LAKES AND PONDS.—Continued.

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Deering.....	Dudley's.....	30	Rocky.....	Perch, pouts.
".....	Pecker's.....	10	Muddy.....	Pouts, eels.
".....	Fulton's.....	100	Muddy, rocky...	Pick'l, perch, pouts.
Derry.....	Gregg's.....	147	Sandy.....	Bass, pick'l, perch, pouts.
".....	Beaver.....			
".....	Upper Shield's..			
".....	Lower Shield's..			
Dixville.....	Trout.....			Trout.
".....	Moose.....			Trout.
Dorchester....	Norris.....	300	Muddy.....	Pickerel.
".....	Trout.....	50	Sandy.....	Trout.
".....	McCutchins.....	70	Sandy.....	Trout, pouts.
".....	Town-Line.....	150	Rocky.....	Pickerel, pouts.
".....	Mudgett.....	100	Muddy.....	Pickerel.
Dublin.....	Mud.....			
".....	Monadnock.....	600	Rock and sand..	Trout.
".....	Farnum.....			
".....	White.....			
Dummer.....	Lary.....	3	Muddy.....	Trout, pick'l, suckers, dace.
".....	Dummer.....	125	Rocky.....	Trout, suckers, dace.
".....	Corner.....	50	Rocky, sandy...	Trout, suckers, dace.
".....	Little Dummer..	15	Muddy.....	Trout, suckers, dace.
Dunbarton....	Kimball's.....	100	Sandy, rocky....	Pick'l, eels, horned pouts.
".....	Long.....	80	Muddy.....	Perch, shiners, flat-sides.
".....	Gorham.....	75	Muddy.....	Bass (1875).
".....	Purgatory.....			Pick'l, perch, eels.
Eaton.....	Robertson's.....			
".....	Long.....			
Effingham....	Province.....	1000		
".....	Leech's.....			
Ellsworth....	Ellsworth.....	100		
Enfield.....	Mascoma Lake..	500	Rocky.....	Bass ('68-'69), pike-perch ('77), pickerel, pouts, eels, suckers.
".....	East pond.....	350	Rocky.....	Bass ('74), pickerel, pouts, eels, suckers.
".....	Spectacle.....	150	Rocky.....	Bass ('75), pouts, sunfish, pick'l, perch.
".....	George.....	50	Muddy.....	Pout, pickerel, sunfish, perch.
".....	Eastman's.....	75	Rocky.....	Pick'l, sunfish, perch.
".....	Cold.....	50	Rocky.....	Bass ('74), pickerel, sunfish, perch.
Epsom.....	Chestnut.....	35	Rock and sand..	Pickerel, bream, perch, shiners.
".....	Round.....	1	Mud and sand..	Pickerel, bream, perch, shiners.
".....	Odiorne's.....	15	Mud and sand..	Pickerel, bream, perch, pouts.
Erroll.....	Aker's.....			
".....	Main.....			
Epping.....	Carpenter's.....			Bass (1877).
Fitzwilliam...	South.....	300	Sandy.....	Pickerel, per'h, bl'ck bass.
".....	Scipp.....	200	Muddy.....	Pickerel, perch.
".....	Rockwood's.....	100	Sandy.....	Pickerel, perch.
".....	Collins.....	30	Muddy.....	Pick'l, perch, smelts (1876).
Francestown...	Haunted.....	216	Sandy.....	Bass ('76), pickerel, perch.
".....	Pleasant.....	216	Sandy.....	Bass ('76), pickerel, perch.

LIST OF LAKES AND PONDS.—*Continued.*

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Franklin.....	Webster Lake..	100	Sandy.....	Bass ('68), pickerel, salmon, trout, p'ch. Bass (1868), trout.
Franconia.....	Echo Lake.....			
Freedom.....	Trout.....			
".....	Danforth.....	560	Muddy.....	Pick'l, perch, shin'rs
".....	Danforth Bay ..	1000	Muddy, sandy..	Pick'l, perch, shin'rs
".....	Ossipee.....	1500	Muddy, sandy..	Pick'l, trout, shiners
".....	Swazey.....	250	Muddy.....	Pick'l, perch, shin'rs
Fremont.....	Loons.....			
Gilford.....	Little.....	50	Muddy.....	Pick'l, perch, pouts, eels.
".....	Saltmarsh.....			
Gilmanton.....	Loon.....			Black bass.
".....	Lougee.....			Black bass.
".....	Young's.....			
".....	Rocky.....			
".....	Round.....			
".....	Shellcamp.....			
Gilsum.....	Converse.....	2	Muddy.....	Trout.
Goshen.....	Rand's.....	100	Rocky, sandy..	Bass, pick'l, pouts.
Grafton.....	Grafton.....	100	Rocky.....	Bass, pick'l, pouts.
".....	Kilton's.....	100	Muddy.....	Perch, pick'l, pouts.
".....	Tewksbury's....	50	Various.....	Bass (1875), pickerel.
".....	Mud.....	20		Pickerel, pouts.
".....	Half-Moon.....	50	Sandy.....	Pickerel, pouts.
Grantham.....	Grass.....			
".....	Butternut.....	175	Muddy.....	Pickerel, eels, perch, pouts.
".....	Stocker.....	200	Muddy, sandy..	Pickerel, eels, perch, pouts, <i>smelts</i> (1877), <i>bass</i> ('76), suckers, dace.
".....	Eastman.....	300		Pickerel, eels, perch, pouts.
".....	Cranberry.....			Pick'l, perch, pouts.
".....	Leavitt.....			Pick'l, perch, pouts.
".....	Miller.....	175		Pick'l, perch, pouts, <i>bass</i> (1874).
Greenfield.....	Pollard's.....	300	Muddy, sandy..	Pick'l, perch, pouts.
".....	Gould's.....	150	Sandy.....	Pickerel, perch.
".....	Cragin's.....	150	Muddy, sandy..	Pickerel, pouts.
".....	Hogback.....	10	Muddy.....	Pouts.
".....	Bridge's.....	10	Muddy.....	Perch, pouts.
Groton.....	Spectacle.....	100	Rocky and sandy	Pickerel, perch.
".....	Little.....	4	Muddy.....	Pickerel.
Hampstead.....	Angle.....	400	Rocky.....	Pickerel, perch, pouts, <i>black bass</i> .
".....	Island.....	900	Rocky.....	Bass (1877), pickerel, perch, pouts, etc.
".....	Wash.....	350		Bass (1877), pickerel, perch, pouts, etc.
Hancock.....	Half-Moon.....	25	Muddy.....	Pick'l, pouts, perch.
".....	Long.....	800	Rocky and sandy	Pick'l, perch, pouts, dace.
".....	Norway.....	40	Muddy.....	Pick'l, pouts, perch.
".....	Jugernet.....	15	Rocky.....	Pickerel, pouts.
".....	Hunt.....	75	Rocky.....	
Harrisville.....	Harrisville.....	120	Rocky.....	Pick'l, perch, pouts, dace.
".....	Breed.....	100	Rocky and sandy	Pick'l, perch, pouts, dace.
".....	North.....	300	Rocky.....	Pick'l, perch, pouts, dace.
".....	Norway.....			
".....	Pratt.....			
Haverhill.....	Wood's.....	1	Muddy.....	Perch, pouts.

LIST OF LAKES AND PONDS. — *Continued.*

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Haverhill	French	5	Muddy, sandy...	Perch, pouts.
Henniker	Long	175	Various.....	<i>Bass</i> ('74), <i>smelt</i> ('76), pick'l, perch, pouts.
"	Gove's	80	Hard	<i>Bass</i> ('74), <i>smelt</i> , eels.
"	Whittaker	100	Various.....	<i>Bass</i> ('74), pickerel, perch.
"	Upper.....	75	Various.....	<i>Bass</i> ('74), pickerel, perch, etc.
"	Cranny	100	Hard	<i>Bass</i> ('74), pickerel, perch, etc.
"	Middle	50	Various	<i>Bass</i> ('74), pickerel, perch, etc.
"	Pleasant	75	Hard	<i>Bass</i> ('74), pickerel, perch, etc.
"	Grassy.....	60	Hard	<i>Bass</i> ('74), pickerel, perch, etc.
"	Clark's.....	12	Muddy	<i>Bass</i> ('74), pickerel, perch, etc.
"	Morrill's	30	Muddy	Pickerel, trout.
"	Camp-Swamp...	40	Various	<i>Bass</i> ('75), pickerel, trout, etc.
"	Little	15	Various	Pickerel, perch.
Hill	Poverty	50	Muddy	Pout, formerly trout.
"	Weeks	125	Hard	Pickerel, perch.
Hillsborough	Contention.....	225	Sandy	Pick'l, perch, pouts.
"	Loon	225	Rocky and sandy	Pickerel, perch, <i>bass</i> ('74), pouts.
"	Campbell's	85	Rocky and sandy	Pick'l, perch, pouts.
"	Merrill's .....	.....	.....	Pickerel, perch, <i>bass</i> (1874).
"	Mud	20	Muddy	Pickerel, pouts.
Holderness	Squam Lake	6400	Rock and sand...	Trout, cusk, pick'l, perch, eels, smelt, barbel, <i>land-locked</i> <i>salmon</i> (1877).
"	Little Squam.....	150	Rock and sand...	Same as Squam L'ke
"	White Oak.....	80	Muddy.....	Pickerel, pouts, eels, barbel.
Hollis	Flints.....	70	Sandy, muddy...	Pick'l, pouts, perch.
"	Long.....	50	Sandy	Pick'l, pouts, perch, bream.
"	Pennichuck.....	150	Sandy, muddy...	<i>Bass</i> ('77), pickerel, pouts, perch, bream.
"	Rocky	75	Sandy and rocky	Pick'l, pouts, perch, bream.
Hooksett.....	Lakin's	1000	Muddy	<i>Bass</i> ('77), pickerel, pouts, perch, bream.
"	Hinman's	125	Muddy	Pick'l, pouts, perch, bream.
"	Sawyer's	200	Muddy	Pick'l, pouts, perch, bream.
"	Clay	100	Muddy	Pick'l, pouts, perch, bream.
"	Pinnacle.....	50	Gravelly.....	Perch, shiners.
Hopkinton	Smith's.....	30	Muddy	Pickerel, pouts.
"	Clement's	300	Sandy	Pick'l, pouts, perch.
"	Grassy.....	100	.....	Pick'l, pouts, perch.
"	Rolfe's	200	Sandy, muddy...	Pick'l, pouts, perch.
"	Chase.....	250	Sandy, muddy...	Pickerel, <i>bass</i> ('75), pouts, perch.
Hudson.....	Little Massabesic	175	Rocky, muddy...	Pick'l, pouts, perch.
"	Otternick	75	Sandy, muddy...	Pick'l, pouts, perch.
Jaffrey	Thorncliffe.....	50	Rocky, muddy...	Pickerel, pouts.
"	Gilmore	200	Sandy and rocky	Pick'l, form'y trout.

LIST OF LAKES AND PONDS.— *Continued.*

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Jaffrey	Frost	100	Muddy.....	Eels, pouts.
"	Long	400	Sandy, muddy...	Pick'el, pouts, perch, suckers.
Jefferson.....	Cherry	100	Muddy.....	Pick'el, pouts.
"	Safety	10	Sandy.....	Trout.
Kensington....	Muddy.....	1	Muddy.....	Horned pouts.
Keene	Wilson's .....	.....	Muddy.....	<i>Bass</i> (1868).
Kingston.....	Great.....	400	Sandy	Pick'el, perch, pouts, <i>black bass</i> .
"	Country.....	300	Sandy, muddy..	Pick'l, perch, pouts.
"	Little.....	50	Muddy.....	Pick'el, perch, pouts, <i>black bass</i> .
"	Half-Moon.....	50	Muddy.....	Pick'l, perch, pouts.
Lancaster.....	Baker's.....	50	Muddy.....	Pick'l, perch, eels.
"	Martin Meadow..	300	Various.....	Pick'l, perch, eels, pouts.
Laconia	Pick'el.....	30	Muddy.....	Pick'el, perch, pouts, eels.
Lee.....	Wheelwright's ..	165	Rock, mud and gravel.....	<i>Bass, pike-perch, white perch.</i>
Lempster.....	Dodge's	110	Various	Pick'el, pouts, eels, sunfish.
"	Long	200	Various, rock and sand.....	Pick'el, pouts, eels, sunfish.
"	Sand	225	Muddy	Pick'el, pouts, eels, sunfish.
"	Beaver	18	Various	Pick'el, perch.
"	Hurd	20	Sandy, muddy...	Pick'el, pouts, perch, etc.
Lincoln.....	Eog.....	100	Sandy, muddy...	Trout.
"	Tamarack.....	50	Sandy, muddy...	Trout.
"	Loon.....	50	Sandy, muddy...	Trout.
Lisbon	Streeter.....	100	Muddy	Pick'el.
"	Perch.....	50	Sandy	Pick'el, perch.
"	Mink	100	Rocky	<i>Smelt</i> (1877), <i>bass</i> (77), pick'l, dace, minnows.
"	Young.....	200	Rocky	Pick'el, perch.
"	Henry.....	10	Muddy.....	Pick'el.
Littleton.....	Partridge.....	100	Hard.....	<i>Bass</i> (1873), pick'el, perch.
Litchfield.....	Darrah.....	14	Sandy	Pick'l, perch, pouts.
"	Rich.....	4	Sandy	Perch, pouts.
"	Common.....	5	Sandy	Perch, pouts.
Londonderry....	Scoby's Upper....	.....	.....	.....
"	Scoby's Lower....	.....	.....	.....
Loudon	Clough's	50	Gravel	<i>Bass</i> , pick'l, perch.
"	Crooked	25	Rock and sand..	Pouts, pick'l, perch.
"	Hot-Hole	25	Rock and sand..	<i>Bass</i> (1870), pick'el, barbel.
"	Rollins's .....	.....	.....	.....
Lyman	Young's	200	Rocky	Pick'l, pouts, suck'rs
"	Dodge's	100	Muddy.....	Pick'l, pouts, dace.
"	Round	50	Muddy.....	Pick'l, pouts, dace.
"	Cowin.....	50	Muddy.....	Pick'l, pouts, dace.
Lyme	Reservoir.....	200	Sandy	Pick'el, perch.
"	Post's.....	200	Sandy	Pick'el, perch.
"	Mud	100	Muddy.....	Trout.
Lyndeborough..	Beuton's.....	20	Muddy.....	Pouts.
"	Badger's.....	15	Muddy.....	Pick'el.
Manchester	Nutt's.....	25	Sandy	Pick'l, perch, pouts.
"	Stevens.....	30	Muddy.....	Pick'l, perch, pouts.
"	Mosquito.....	20	Muddy.....	Pick'l, perch, pouts.
Madbury.....	Barbadoes.....	.....	.....	.....

LIST OF LAKES AND PONDS.—Continued.

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Madison	Silver Lake	2500 .....	.....	<i>Bass</i> (1877), <i>land-locked salmon</i> .
"	Pea Porridge .....	.....	.....	.....
"	Davis .....	.....	.....	.....
Marlborough	Clapp's	30	Muddy	Pick'l, pouts, suc'rs.
"	Stone	100	Rock and gravel.	Pick'l, perch, pouts, shiners, suckers.
"	Meeting-house	50	Muddy	Pick'l, pouts, shin'rs, suckers.
"	Cummings	43	Muddy	Pick'l, pouts, shin'rs, etc.
Merrimack	Spalding's	75	Sand and mud	Pick'l, perch, pouts, bream, <i>bass</i> (1877).
Meredith	Measeley	1500	Sandy and rocky	Pick'l, perch, pouts, <i>bass</i> .
"	Wickwash	700	Muddy	Pick'l, perch, pouts.
"	Forest	50	Muddy	Pick'l, perch, pouts.
"	Robinson's	60	Sandy and rocky	Pick'l, perch, pouts.
Milan	Cedar	300	Muddy	Pick'l, perch, pouts, eels.
"	Nay's	200	Muddy	Pick'l, perch, pouts, eels.
Milton	Tri-Echo Lake	2000	Various	<i>Bass</i> , pick'l, perch, pouts, eels, <i>white perch</i> , <i>California salmon</i> .
"	Jones River .....	.....	.....	<i>California salmon</i> .
Middleton	Reservoir	500	Sand and mud	<i>Bass</i> (1877), pickerel, and a few trout.
Millsfield	Millsfield .....	.....	.....	Trout.
"	Moose .....	.....	.....	Trout.
"	Rock .....	.....	.....	Trout.
Moultonboro'	Long	500	Sandy	<i>Bass</i> (1873), pickerel.
"	Red Hill .....	.....	.....	<i>Bass</i> (1873).
"	Berry	160	Muddy	Pickerel.
Nelson	Munsonville .....	.....	.....	.....
"	Center .....	.....	.....	.....
"	Spoonwood	170 .....	.....	Pick'l, perch, pouts, dace.
"	Tolman	41 .....	.....	Pick'l, perch, pouts, dace.
Nashua	Round	25	Sand and mud	Pick'l, perch, bream.
New Boston	Railey's	15	Rocks and mud	Pick'l, perch, pouts.
"	Beard's	11	Muddy	Pick'l, perch, pouts.
"	Joe English .....	.....	.....	.....
"	Shirley	10	Muddy	Pick'l, perch, pouts.
"	Negro	14	Muddy	Pick'l, perch, pouts.
New Durham	Shaw's	100	Gravel	Perch, pouts.
"	March's	150	Gravel and mud	Pickerel, pouts.
"	Merry-meeting	1050	Gravelly	Trout, pick'l, cusk, <i>land-locked sal-</i>
"	Cold Rain	50	Muddy	mon. Pickerel.
"	Downing's	75	Mud and gravel	Pouts, pickerel.
New Hampton	Forest .....	.....	.....	.....
"	Jackson's .....	.....	.....	.....
New Ipswich	Pratt's	50	Rocky	Pickerel, pouts.
"	Hoar's	5	Muddy	Pickerel, pouts.
New London	Clark's	50	Muddy	Pick'l, perch, pouts, eels.
"	Messer's	100	Muddy	Picker'l, eels, perch, pouts.
"	Otter	125	Sandy	Pick'l, pouts, suc'rs.
"	Pleasant	800	Sandy	<i>Bass</i> (1870), pickerel, chub, eels, perch.

LIST OF LAKES AND PONDS.—*Continued.*

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
New London	Little Sunapee	1200	Sandy	Pick'l, pouts, suc'rs.
Northfield	Chestnut			
	Sondogardy			
Northwood	Suncook	400	Sandy	Bass (1877), pickerel, perch, pouts, eels.
"	Jenness	300	Sandy	Bass (1874), pickerel, perch, pouts, eels.
"	Long			
"	Little Bow	100	Muddy	Pick'l, perch, pouts, eels.
"	Harvey	200	Sand and mud	Bass (1877), pickerel, perch, pouts, eels.
"	Durgin			
"	Knowlton	100	Sandy	Pick'l, perch, pouts, eels.
Nottingham	Pawtuckaway	1000		Bass (1877).
	Quincy	300		
Odell	Trio			
"	Cranberry			
Orange	Orange			
Orford	Brackett's			
"	Rocky			
"	Turtle			
"	Baker's Upper			
"	Reservoir			
"	Indian			
Ossipee	White	100	Sandy	Smelt.
"	Duncan	100	Sandy	Pickerel, pouts.
"	Garland's	300	Rocky	Trout, pouts.
"	Connor	500	Rocky	Trout, pouts.
"	Bean	40	Rocky	Trout, pouts.
"	Dan's Hole	500	Rocky, very deep	Trout.
Pelham	Long	600	Rock and sand	Pick'l, perch, pouts.
"	Gumpas	100	Rock and mud	Pick'l, perch, pouts.
"	White's	50	Sand and gravel	Pick'l, perch, pouts.
"	Island	200	Sandy	Pick'l, perch, pouts.
Peterborough	Cunningham	30	Sandy	Pick'l, perch, pouts.
"	Pierce	10	Sandy	Pick'l, form'ly trout.
Piermont	Lily	50	Muddy	Pickerel.
"	Fellows'	500	Various	Pick'l, perch, pouts, eels, black bass.
"	Tarleton's Large.	900	Various	Pick'l, perch, pouts, eels.
"	Tarleton's Small	500	Various	Pick'l, perch, pouts, eels, black bass.
Pittsfield	Berry's	25	Sand and gravel	Pick'l, perch, bream, bass (1874).
"	Eaton's	8	Rock and sand	Pick'l, perch, bream, pouts.
"	Wild Goose	350	Muddy	Pick'l, perch, pouts.
"	Blake	5	Muddy	Pick'l, perch, pouts.
"	Horse	1	Muddy	Perch.
Plainfield	Moses'	40	Muddy	Pouts, suckers.
Randolph	Safety	75	Muddy	Trout.
Raymond	Jones	800	Sandy	Bass (1877), pickerel, perch.
"	Governor's	400	Muddy	Pick'l, perch.
"	Pecker	100	Muddy	Pick'l, perch.
Richmond	Cass	100	Muddy	Pick'l, perch, pouts.
"	Sandy	70	Sand and rock	Pick'l, perch, pouts.
Rindge	Pecker	30	Rocky	Pick'l, perch, slim'rs, po'ts, sunfish, eels.
"	Long	1000	Various	Same as above.
"	Grassy	100	Muddy	Same as above.

LIST OF LAKES AND PONDS.--Continued.

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Rindge.....	Bullet.....	30	Sandy.....	Pick'l, p'r'h, shin'rs, pouts, sunfish, eels.
".....	Pool.....	80	Muddy.....	Same as above.
".....	Manomonack.....	2600	Various.....	Same as above.
".....	Durel.....	30	Muddy.....	Same as above.
".....	Emerson.....	140	Rocky.....	Same as above.
".....	Perley.....	300	Rocky.....	Same as above.
".....	Hubbard.....	300	Various.....	Same as above.
".....	Smith.....	60	Muddy.....	Same as above.
".....	Mud.....	15	Muddy.....	Same as above.
".....	Little.....	12	Muddy.....	Same as above.
".....	Loon.....	260	Muddy.....	Pick'el, perch, roach, bass (1877).
Rochester.....	Ricker's.....	.....	.....	.....
".....	Romia.....	.....	.....	Black bass.
Rollinsford.....	Cochecho.....	.....	.....	Bass (1868).
Roxbury.....	Roaring Brook.....	.....	.....	.....
Rumney.....	Stinson's.....	450	Sandy.....	Bass, pick'l, perch, a few trout, suckers.
Salem.....	Captain's.....	160	Mud and rocks.....	Pick'l, perch, pouts.
".....	Policy.....	1000	Rocky and sandy.....	Pick'el, perch, bass (1877).
".....	World's End.....	140	Muddy.....	Pick'l, perch, pouts.
Salisbury.....	The Bay.....	500	Muddy.....	Pick'l, perch, pouts.
".....	Greenough's.....	10	Muddy.....	Pick'el, pouts.
".....	Wilder's.....	3	Hard.....	Pick'el, trout.
".....	Tucker's.....	35	Hard.....	Pick'el, pouts.
".....	Duck.....	.....	.....	.....
Sanbornton.....	Rollins.....	23	Muddy.....	Pick'el, pouts, eels, perch, and a few trout.
".....	Cawley.....	40	Muddy.....	Pick'el, pouts, eels, and a few trout.
".....	Hale's Mill.....	35	Muddy.....	Pick'el, pouts, eels.
".....	Plumer's.....	60	Muddy.....	Pick'el, pouts, eels, trout.
".....	Hunkin's.....	16	Various.....	Pick'l, perch, pouts.
Sandown.....	Clark's.....	50	Muddy.....	Pick'l, perch, pouts.
".....	Phillips.....	425	Sand and mud.....	Pick'el, perch, pouts, black bass.
".....	Punch.....	25	Muddy.....	Pick'l, perch, pouts.
Sandwich.....	Bearcamp.....	400	Muddy.....	Pick'l, perch, pouts.
".....	Red Hill.....	300	Muddy.....	Pick'l, perch, pouts.
".....	Little.....	150	Sandy and rocky.....	Pick'l, perch, pouts.
Somersworth.....	Cole's.....	.....	.....	Bass (1877).
".....	Willard's.....	.....	.....	Smelt (1877).
Springfield.....	Pleasant.....	300	Rocky and sandy.....	Bass (1874), pick'el, perch, pouts.
".....	Morgan.....	125	Sand and mud.....	Same as Pleasant.
".....	Star.....	100	Rocky.....	Pick'el, smelt (1877), trout, land- locked salmon.
".....	Baptist.....	100	Rocky.....	Pick'el, pouts.
".....	Gilman.....	50	Muddy.....	Pouts.
".....	Mud.....	20	Muddy.....	Pouts.
Stark.....	Potter.....	.....	.....	.....
".....	Pike's.....	.....	.....	.....
".....	Piercey's.....	.....	.....	.....
".....	Long.....	.....	.....	.....
Stewartstown.....	Great Diamond.....	200	Muddy.....	Trout.
".....	Ladd.....	5	Muddy.....	Trout.
".....	Little Diamond.....	75	Muddy.....	Trout.
".....	Rock.....	10	Muddy.....	Pike.
Stoddard.....	Center.....	80	Rock and sand.....	Pick'l, perch, pouts.

LIST OF LAKES AND PONDS.—*Continued.*

TOWNS:	Ponds.	Acres.	Bottom.	Fish.
Stoddard.....	Mud.....	200	Muddy.....	Pick'l, perch, pouts.
".....	Island.....	300	Rocky.....	Bass (1873), pickerel, perch, pouts.
".....	Long.....	2000	Rock, sand, mud.	Bass (1873), pickerel, perch, pouts.
Strafford.....	Bow.....	1600	Rocky.....	Pick'el, perch, suckers, pouts, bass (1874).
".....	Little Bow.....	50	Sand and mud...	Pouts.
".....	Wild Goose.....	40	Muddy.....	Pouts.
".....	Trout.....	35	Rocky and sandy	Pouts, a few trout.
Success.....	Success.....			
Sunapee.....	Ledge.....	300	Rocky.....	Bass, pickerel, perch, etc.
".....	Perkins.....	250	Muddy.....	Pick'el, pouts, eels, suckers.
".....	Spectacle.....	100	Muddy.....	Pick'el.
Sullivan.....	Bolster.....	75	Rock and sand...	Trout, pouts, pick'el, perch.
".....	Chapman's.....	75	Various.....	Trout, pouts, pick'el, perch.
Sutton.....	Russell.....	10	Muddy.....	Pick'l, perch, pouts.
".....	Billings.....	25	Various.....	Pick'el, pouts.
".....	Kezar's.....	225	Sandy.....	Pick'el, perch, pouts, dace.
".....	Gile.....	100	Muddy.....	Pick'l, perch, pouts.
".....	Blaisdell's.....	150	Sandy.....	Pick'el, perch, black bass (1870).
Swanzy.....	Great.....	160	Various.....	Pick'el, perch, pouts, etc.
".....	Locke's.....			
Tamworth.....	Great Hill.....	150	Muddy.....	Pick'el, pouts.
".....	Chocorna.....	250	Sand and mud...	Bass (1877), pickerel.
".....	Elliott.....	100	Muddy.....	Pick'el, pouts.
".....	White's.....	175	Sandy.....	Bass (1877), pickerel, pouts.
".....	Whitten.....	300	Rocky.....	Trout.
".....	Knowles.....	200	Muddy.....	Pick'el.
".....	Pequaet.....	100	Rocky.....	
".....	Church.....	200	Muddy.....	Trout.
".....	Sawyer.....	100	Muddy.....	Trout.
".....	Jeems.....	100	Muddy.....	Trout.
Thornton.....	Picket Hill.....	10	Muddy.....	Trout, pouts.
".....	Cone's.....	5	Muddy.....	Pouts.
Tuftonborough.	Lower Beech.....			
Unity.....	Dish-water.....			
".....	Beaver Meadow.....			
".....	Gilman.....	300	Gravelly.....	Pick'el, formerly trout.
".....	Whortleberry.....			
Wakefield.....	Lovewell's.....	1200	Sandy and rocky	Pick'el, perch, California salmon, blue-backed trout.
".....	Newichiwaniack.....			California salmon.
".....	Province.....	1100	Rocky and sandy	Pick'el, perch, bass (1877).
".....	Pine River.....	1000	Rock and mud...	Pick'l, eels, perch.
".....	Great East.....	3000	Rocky and sandy	Pick'el, black bass (1869).
Warner.....	Bagley's.....	22	Muddy.....	Pick'l, eels, perch.
".....	Bear.....	48	Rocky.....	Pick'el, pouts, formerly trout.
".....	Pleasant.....	20	Rocky and sandy	Pick'el, pouts, bass (1870), perch.

LIST OF LAKES AND PONDS.—*Continued.*

TOWNS.	Ponds.	Acres.	Bottom.	Fish.
Warner	Tom's	34	Muddy	Pick'l, perch, pouts.
"	Simmons	30	Rocky	Trout, pouts.
"	Day	12	Muddy	Pickerel, pouts.
Warren	Glen Ponds	55	Muddy	Trout.
"	Mede	30	Muddy	Pouts, suckers.
"	Weeks	10	Muddy	Trout.
Washington	Ashuelot	400	Muddy	Pick'l, perch, dace, bass, pouts.
"	Ayers	40	Muddy .....	.....
"	Bacon	50	Muddy, rocky .....	.....
"	Bear	4	Muddy	Trout.
"	Borden	80	Muddy	Perch, pouts, pick- erel, trout.
"	Borney	10	Very muddy .....	.....
"	Brockway's .....	.....	.....	.....
"	Free Island	15	Very muddy	Pouts.
"	Fletcher	20	Very muddy .....	.....
"	Frog	75	Very muddy	Perch, pouts.
"	Half Moon	200	Rocky	Suckers, pickerel, pouts, perch, bass.
"	Hedgehog	50	Very muddy	Pouts, suckers.
"	Island	500	Rocky	Trout, pick'l, perch, pouts, bass.
"	Lang, pt. in Wshn	400	Very muddy	Pick'l, perch, pouts, bass.
"	May	420	Muddy	Pick'l, trout, perch, black bass.
"	Mellen	350	Sandy, clay, and rock	Pick'l, perch, bass.
"	Newman	20	Very muddy	Perch, pickerel.
"	North	250	Muddy	Pick'l, trout, perch, suckers.
"	Philbrick	15	Muddy	Perch, pouts.
"	Smith	75	Muddy	Suck'rs, perch, pouts.
"	Trout	3	Muddy	Trout.
"	Vickery	15	Very muddy	Pickerel, pouts.
Webster	Long	320	Various	Bass (1871), pickerel, perch, eels.
"	Great	250	Various	Pouts, suck'rs, perch, eels.
Weare	Ferren's .....	.....	.....	.....
"	Mount William .....	.....	.....	.....
Wentworth's L.	Wentworth .....	.....	.....	.....
Wentworth	Rocky	20	Sand and rock	Trout.
"	Brown's	500	Rock and mud	Bass (1875), pickerel, pouts, eels, trout.
"	Line	300	Sand and mud	Pick'l, perch, pouts, eels.
Wilmot	Moody .....	.....	.....	.....
"	White	10	Clear	Pick'l, trout, suck- ers, pouts.
"	Eagle	50	Sandy	Pick'l, perch, trout, chub, suck'rs, pout.
"	Piper	40	Muddy, rocky	Pick'l, trout, pouts.
Windsor	Black	70	Muddy	Pick'l, perch, pouts.
"	White	55	Sandy	Pick'l, perch, pouts.
"	Bagley	40	Muddy	Pick'l, perch, pouts.
Whitefield	Burns	250	Rock and sand	Pick'l, perch, pouts.
"	Blood's	100	Muddy .....	.....
"	Hale	100	Rock and sand	Pick'l, perch, pouts.
"	Hazen's	200	Rock and sand	Pick'l, perch, pouts, bass (1876).
"	Round	250	Rock and sand	Pick'l, perch, pouts.
"	Little Cherry	100	Muddy	Pick'l, perch, pouts.

LIST OF LAKES AND PONDS.— *Continued.*

Towns.	Ponds.	Acres.	Bottom.	Fish.
Winchester.....	Humphrey's.....	150	Various	Pick'l, perch, pouts, eels.
"	Round.....	8	Various	Pick'l, perch, pouts, eels.
Windham	Cabot's.....	1100	Various	Pick'l, perch, pouts, lake trout, smelt (1894).
"	Policy	1200	Various	Bass (1877), pickerel, perch, pouts.
"	Hititite	125	Mud.....	Pick'l, perch, pouts.
"	Mitchell's.....	25	Mud.....	Pick'l, perch, pouts.
Woodstock.....	Loon	30	Various	Trout.
"	Elbow	75	Various	Pickerel, pouts, formerly trout.
"	Hubbard's.....	30	Muddy	Pickerel.
"	Russell.....	40	Mud and sand ..	Trout, pouts.
"	Gordon.....	12	Muddy	Trout.
"	Moran.....	20	Muddy	Trout.
Wolfeborough..	Smith's	5120	Rock and sand ..	Bass, pick'l, smelts, California salmon.
" ..	Rust's	720	Stony	Bass (1865), pickerel, roach.
" ..	Beach	480	Sandy	Pick'l, perch, pouts.
" ..	Crooked.....	320	Stony	Bass (1871).
" ..	Sargent's	240	Muddy	Pick'l, perch, pouts.
" ..	Garland's	120	Muddy	Pick'l, perch, pouts.
" ..	Barton's.....	80	Muddy	Pouts, eels.

И

